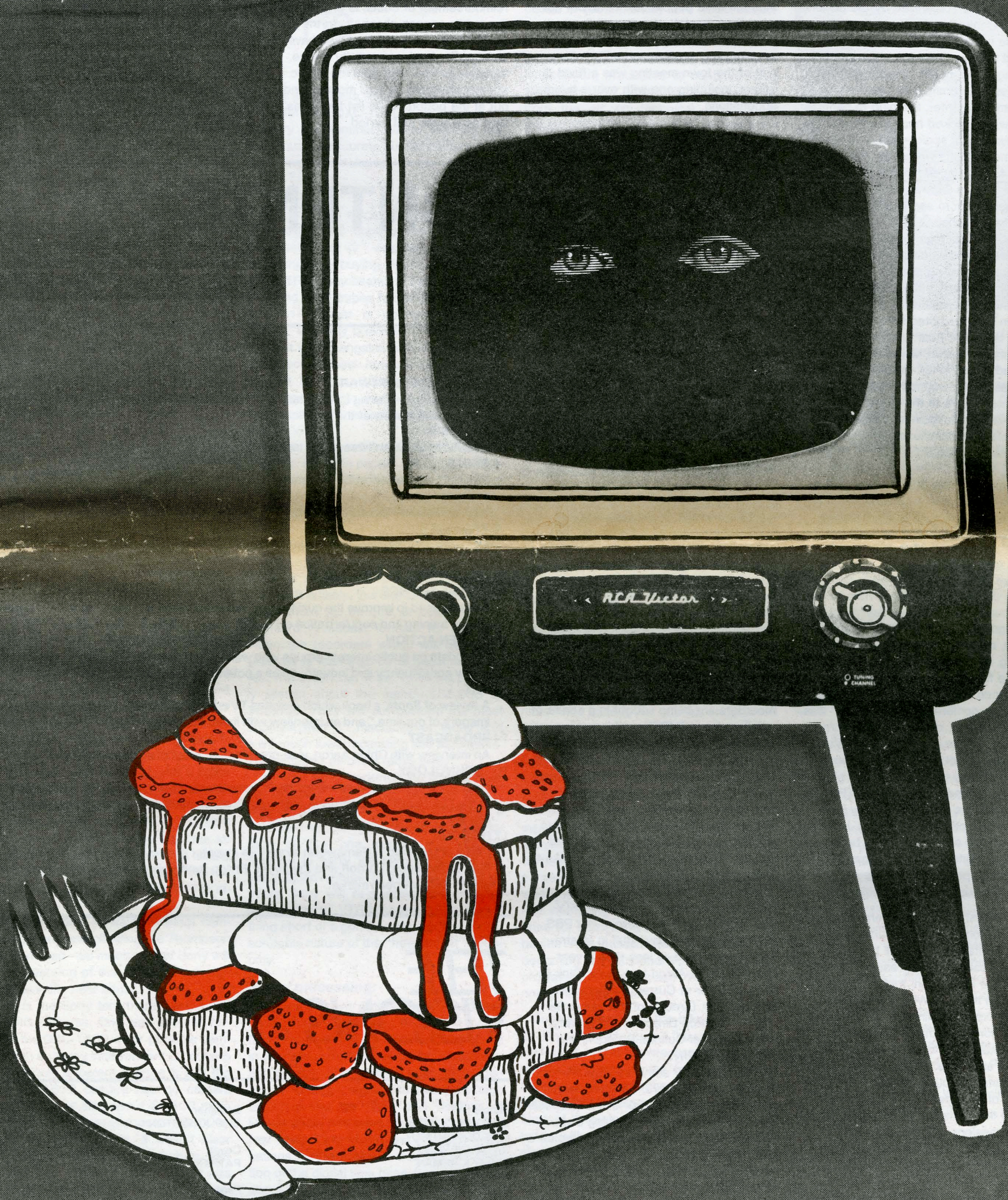


TELEVISIONS

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THE 526TH LINE

The citizens media movement is alive—as witnessed by the June 24-26 conference on “Communications Policy—The Public Agenda” organized by the National Citizens Committee for Broadcasting—but all is not well. Nearly 300 people jammed the five “task force” sessions covering cable, public broadcasting, minority issues, commercial “trusteeship,” and common carrier, listening to panels which were stacked heavily with industry and government spokesmen (and we do mean men, mostly white). By the second day, led by outraged black and Hispanic contingents who were angry in addition, over their *de facto* segregation into a separate workshop, a group demanded from NCCB Chairman Nick Johnson that one session allow grassroots people to share information to discuss strategy, and to set their own priorities without so many industry types around. The rump session also prompted fireworks at the NCCB late-night Board meeting and at the plenary session, when the audience pressed Johnson for some way to make the Washington-bound NCCB structure more responsive to the grassroots. The conference proceedings, including the task forces’ recommendations, will be published by NCCB.

Conference’s greatest preoccupation was how to provide input (and, more importantly, what to say) to the Congressional and White House “re-write” of the 1934 Communications Act. Legislation will be written by the winter, following massive hearings all summer in the House Subcommittee. The White House is preparing its recommendations in areas like rural telecommunications, spectrum issues, minority ownership, public broadcasting, as well as FCC appointments and the future of policy within the Executive branch itself. (The *NY Times* reported during the conference that the OTP was being abolished, causing quite a flurry of denials by White House staffers). Public broadcasting got most attention, because of the currency of the new Carnegie Commission and because the OTP effort in the field was being headed by long-time citizen activist Frank Lloyd. He emphasized that one problem will be dramatizing a constituency for changes in communications policy, in the face of a powerful industry and low public interest.

Most interest in the newly announced Carnegie Commission on Public Broadcasting centers on who will be tapped for top staff positions. With resumes arriving at Carnegie by the ton, trade rumors most often mention WGBH’s Michael Rice for executive director. As for the Commission itself, there is no doubt that the vast majority of the 20 appointees are “Blue Ribbon” members of Establishment groups, although Eli Evans, director of the Task Force that recommended the Commission, strongly urged that expressions of interest be sent to the Carnegie Corporation of New York, 437 Madison Avenue, NY 10022.

The Senate Subcommittee on Communications two months ago heard critical comments on the state of television via videotape. A 15-minute tape, produced by Bill Bradbury, News Director of WCBY-TV, Coos Bay, Oregon, showed people in town meetings discussing TV in several small lumbering communities on the Oregon coast. Most of the comments were highly critical of commercial TV.

Sen. Robert Packwood (R-Ore.) expressed surprise that so many comments were negative. Bradbury replied, “The ratings tell what people don’t like, but not what they want. It wasn’t until the very end of the meetings that people could say anything positive about TV.” One result of the town meeting was a flood of letters, including one with over a hundred suggestions.

Public TV stations refused to pay \$25,000 (\$11,000 under cost) for the 90-minute, award-winning video documentary *The Police Tapes* by Alan and Susan Raymond when it was offered for purchase in the Station Program Cooperative second round in June. Money went instead for a new latenight daily Dick Cavett series, another package of the bizarre hit “Meeting of the Minds” (wherein host Steve Allen interviews actors impersonating famous characters from centuries past), and a \$500,000 special-events coverage fund that would, for the first time, be available to stations around the country as well as going to WETA’s live programs from Washington.

No doubt these shows, particularly the special-events package, are worthy entries for the fall PBS schedule, but the rejection of *The Police Tapes* does not bode well for the future of such purchases by the stations.

CPB’s new Revolving Documentary Fund depends for its success on the willingness of stations to replenish the Fund by purchasing documentaries. Less than half of the stations voted yes, however, on a program which has already been aired with great success in NY, garnered many awards, and which is rather cheap, as these things go.

Interchangeability standards for the new nonsegmented one-inch helical video recorders are being sought in a series of meetings by a SMPTE working group. (see NAB report by Parry Teasdale, p. 3). Next meeting is in Chicago in July. The battle is between Sony, Ampex, and Bosch-Fernseh (licensed by RCA). If agreement isn’t reached, the three will slug it out in the marketplace. (Previous generations of 1” hardware numbered around 30, much of it obsolete, thanks to the vagaries of the market.)

Many empty offices vacated by PTV bureaucrats: four members of the PBS programming staff have quit in frustration or been fired, in less than a year after VP Chloe Aaron took over: Dick Elison, Director of Current Affairs; John Montgomery, Director of Educative Services; Research Director Rick Beatty; and Director of Cultural Programming Fred Cohen. Why?

On the CPB TV activities staff one of three program officers, Candyce Martin, quit this month. Co-author of the proposal for the now operating Revolving Documentary Fund, Martin had to fight inside CPB to get it adopted, only to find the responsibility for the project taken out of her hands.

Evidence indicates that a registered foreign agent has been receiving financial support from foreign governments and an international organization for programs she presents on the public access channels of Manhattan Cable TV. The NYC Bureau of Franchises specifically prohibits receiving funds for productions shown on the public access channels.

The extra scan line presents our Point Of View on the state of communication arts, business, and public action.

According to Leonard Cohen, coordinator of the City’s Office of Telecommunications, receiving money, even for the reimbursement of costs, is prohibited on the public access channels. In the past year at least three other shows have violated the business activity clause. Violators are banned from the public access channels for two months, and put at the bottom of the list for series’ time slots after that period.

Americana, a half-hour anthology of documentaries on PBS last season, has been cancelled in the fall schedule for lack of money, and limited audience response (ratings). The show is given a 50-50 chance of being revived in January. The slot was filled primarily with station-produced documentaries, but was seen by many independent producers as a perfect spot for new, shorter documentary works.

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RESOURCES

Damming the information flow. A catalog of people, meetings, books, survival techniques, and directions on how to find what we left out.

HARDWARE

Cameras, Digital Technology And One-Inch VTRs

A report from NAB

By PARRY D. TEASDALE

Think of a side show. Think of row after row of barkers calling for you to come in to see the "absolutely amaaaaazing" freaks just behind the curtain and all for only one quarter, one fourth of a dollar. Now multiply the cost of admission by about 100,000. What you have is the equipment show at the annual convention of the National Association of Broadcasters and the base price for most anything worth owning.

In the past few years the video electronics industry had often seemed to be moving against the grain of current economics: things had actually be getting cheaper. But not this year. Instead, most manufacturers chose to improve or expand the performance of their equipment and hold the price steady.

Cameras:

Cameras are a good example. It used to be that a Philips or RCA portable color camera cost more than \$75,000. In the last few years several Japanese manufacturers (especially Ikegami and Hitachi) have entered the market with less expensive (\$25-\$60,000), lighter, and more versatile cameras. Last year Thompson CSF, the company that bought CBS Labs, introduced the "micro-cam," an eight pound camera with excellent color quality.

CBS was promised the first few of them for the 1976 national political conventions and they're still owed another dozen. The reason the network was so anxious to have these cameras was not only for their size and weight but also for their incredible sensitivity. Clear color pictures can be had in as little as three foot-candles. That's less light than you need to shoot with a black and white portapak system. The camera makes studio lighting unnecessary except for dramatic effect. And, even at \$33,000 each, there is a long waiting list. One independent producer had his name added to that list. "Who knows," he said. "Maybe by the time they get to me I'll be able to afford it."

ENG (Electronic News Gathering) cameras in general are following the Thompson micro-cam lead—so much so that Sony will market a version of the Thompson design sometime in the near future.

Over at the Sony tent there were a few new ENG cameras. One was another version of the DXC-1600 color portable camera which so many independent producers use. The only apparent change is that the new DXC 1610 camera has no camera control unit. It is also about \$1,500 more expensive than its predecessor (\$5000). Contrary to Sony claims, it wasn't clear from the camera on display that its performance was superior in any way. It was also hard to get straight information from the Sony people. All the equipment they were showing was the Sony Broadcast line, available only from Sony headquarters. All, that is, except the DXC-1610 which is a consumer product available from dealers. This schizophrenia was a concession to the poorer (cheaper?) TV stations who set their ENG sights lower. The 1610, like every other new camera made, has the viewfinder mounted on the side so that the

rear of the camera rests on the operator's shoulder. The DXC-1610 is scheduled for delivery this summer. Claims like that are notoriously inaccurate but the camera is already available in Japan.

VTRs:

Broadcasting magazine quotes a CBS executive: "We hope we've bought our last quadruplex (2" videotape) recorder." What they are buying (like candy) is one-inch VTRs. Sony seems to be the leader in this field with Ampex hot on its heels. The Sony 1" format is not compatible, of course, with any previous 1" tape system nor is it interchangeable with the Ampex or the Bosch-Fernseh formats currently being pushed. In spite of this insanity, CBS and NBC now own as many as 30 Sony machines and ABC is well endowed with the Ampex VTRs.

In their infinite wisdom CBS and ABC put together a "white paper" asking the industry standard-setting body, the Society of Motion Picture and Television Engineers (SMPTE) to develop specifications for a 1" standard videotape recording format. Not surprisingly, the networks have asked the SMPTE for a kind of hybrid of the best features of all three of the present 1" machines. It is likely, therefore, that within two years there will be one, or possibly two!, standard broadcast formats for one-inch videotape recorders which will be manufactured or marketed by all major companies. The initial cost of the VTRs will probably remain about the same—\$35,000 to \$80,000. They will out perform the most sophisticated 2" machines of today and have much lower operating and tape costs. Thus another dinosaur fades away.

In 1968 Sony marketed the first portable "record-only" ½" VTR. Now, in 1977, they've come up with a fresh, new idea: a "record-only" ¾" VTR. The obvious advantage is that one person can actually manage to carry the darn thing. The obvious disadvantage is that in a couple of years Sony will re-discover the "record-and-playback" VTR light enough for something short of a gorilla to lug. Such is the inscrutable nature of the "free market" economy.

Signal processing:

If there was any outstanding trend of this show, it was the rush by equipment manufacturers to use digital information systems in everything from signal processing to station breaks. Converting a constantly flowing, or "analog", signal into a series of digital pulses (like the "dots" and "dashes" of Morse code) has been possible for the last few years. One of the first practical applications of this principle was the introduction of the digital time base corrector (TBC) about five years ago. Time base correctors compensate for errors in the timing of the synchronous signals. These errors are especially severe in ½" and ¾" recordings. The leaders in this field still seem to be Microtime and CVS although Sony, Ampex and IVC also make or market their own time base correctors, with many independent companies in the TBC business.

This year Thompson CSF introduced another application of digital video. They have

a device that significantly reduces the noise, or annoying "graininess", of video signals passed through it. For years, broadcasters have been slighting ½" and ¾" because of the instability and noise associated with those formats. Digital technology has gone a long way toward eliminating those complaints and making it possible for independent producers to continue using their own tools while not being excluded from the air on technical grounds. At around \$20,000 each, noise reducers and time base correctors are expensive beauty salons for ugly video.

A third use for digital video is the storage of still-frames. The present method of storing still-frames uses a large platinum disc. It's a cumbersome and expensive system. Now it's possible to translate frames of video into digital language and store them on magnetic tape or in computer memory systems. The computer then indexes the frames and they can be withdrawn from the memory at whatever rate is desired and through whatever processing systems can be devised. Among other things, this allows for the creation of an incredible range of special effects including such flashy tricks as spinning a video image (moving or still-frame) on its axis.

The future of video technology is unquestionably linked to the expanding use of digital computer systems. Eventually all television signals will be produced, stored and perhaps even transmitted in digital form. This would seem to indicate that video tools will continue to become more versatile and less expensive. But never underestimate the power of this industry to make life difficult.

One other category of equipment on display was microwave transmitters. Several companies were displaying portable microwave systems designed to relay audio and video signals from a remote location to a more fixed base (truck, studio, etc.). Some of these devices were turned on for display purposes. Microwave systems offer the temptation of being released from the VTR altogether, free to roam wherever you and your camera want to go. The problem is that they may also present serious environmental and occupational hazards. Manufacturers, for the most part, aren't concerned. The federal government is concerned. But in typical fashion, it prefers to wait until the damage has been done before interfering in the sanctity of free enterprise for something as trifling as people's health. With broadcasters and producers becoming more and more committed to microwaves, a major clash over this technology is in the making.

Business is good in the television industry. Revenues are up and the cost of equipment isn't. In this climate, broadcasters are buying all types of new equipment. What they now own is a technology in which the barriers that created the technical distinctions of "broadcast" and "non-broadcast" tapes will disappear. There will be, very simply, just video tapes. For independent producers the challenge of this technology is clear. We must make sure that there is not just television.

Parry D. Teasdale is a video producer who works with the Media Center in Lanesville, N.Y. This report was written with the help of interviews by Jim Mayer, who has worked with Videopolis, Optic Nerve and other independents. Mayer now runs the video facility for Xerox Research in Palo Alto.

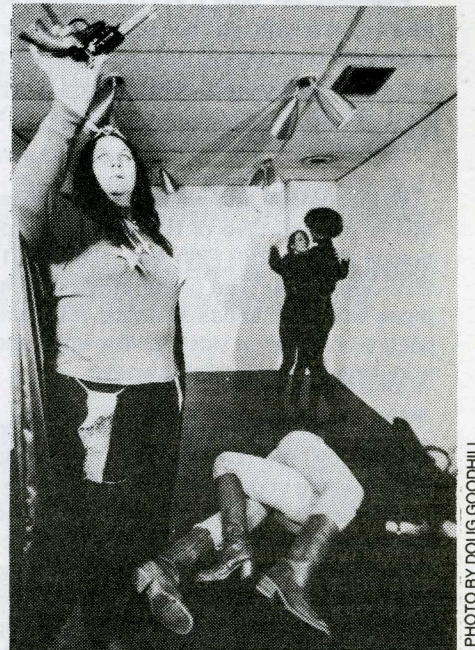


PHOTO BY DOUG GOODHILL

MISS USA is a live video performance produced, directed, and conceived by Patricia Molella. Also available on tape, the live piece was first performed in March in Wash., D.C. at the Foundry Gallery. It features original music for keyboard and vibrator by Else Hayse and Molella. For info. contact P. Molella, 1357 F. St. NE, Wash., D.C. 20002.

SOFTWARE

Joe McCarthy, Medicine for Kids, New CPB Docs

The antiwar movement is the subject of a proposed TV series of documentaries for TV by Catalyst Films of Madison, Wis., a group just funded to produce a documentary about Joe McCarthy (see below). Some funding has come from state and national Humanities Endowments, and negotiations are underway with several public TV entities for packaging.

The film will focus on the issues, events, and legacy of the 1960s social protest and antiwar movement through the end of the Vietnam War, centering on Madison as a microcosm. Catalyst has gained rights to 10 years of newsfilm from two local commercial TV stations. According to Glenn Silber of Catalyst, the 3-hour series will make the first extensive use of local TV newsfilm in a historical documentary. For independents, the source will be an important one.

Executive producer is Wisconsin Educational Communications Board.

Teaching Medicine to Kids is a videotape on the experience of teaching medicine to a group of first and second graders. The kids learned to take their pulse, use a stethoscope, and examine their tonsils. The tape is available for rental (\$35.00) and they've also developed a resource guide to accompany the tape. Write to: TEACHING MEDICINE TO KIDS, Box 718, Inverness, Ca. 94937.

TV documentaries, as well as other kinds of films, may be entered to CINE, the principal U.S. representative to interna-

tional film festivals. Write: CINE, 1201 16th St., N.W., D.C. 20036. (202) 785-1136. Film or video formats are accepted.

Raster, a weekly cable show featuring experimental film and video work by independents is seeking tapes to be aired on future programs. Contact: Shalom Hansa, (212) 533-4715.

Features on tape, ½" or ¾", 45-90 minutes in length, are being sought for an anthology and festival of tapes that tell a story shot on location. Details: David Shepard, 66 N. Greenwich Rd., Armonk, NY 10504. (914) AR3-9537.

Anthropology and visual arts coordination is the objective of NY Visual Anthropology Center (298 Fifth Ave., NY 10001, 212-564-2654). The group offers to help those who want to use scientific data sampling techniques in video or film work, and is looking for ethnographic works.

Four new documentaries have been funded by the Corporation for Public Broadcasting under provisions of their "experimental" Revolving Documentary Fund administered by CPB and PBS. The selections, which bring the total under the Fund to ten, exhausts the \$1 million allocation until the finished programs are put up before PBS stations for purchase, probably sometime this fall. Funds from the sale will "revolve" back into the Fund to fund additional documentaries.

The new projects are:

- *Drugs Along the Border*, KERA-TV, Dallas, Kenneth Harrison and Steve Singer, producers. Focuses on drug traffic and control in Texas and Mexico.

- *The Energy War*, produced by D.A. Pennebaker. Concerns lobbying over Pres. Carter's energy proposals.

- *Joe McCarthy: The Man and His Times*, submitted by WHA-TV, Madison, Wis. for Catalyst Films, Glenn Silber and Barry Brown, producers. Concerns the political development and context of Joe McCarthy.

- *The New Klan*, Image Audio, Los Angeles. Explores the resurgence of the native American, racist political group in the 70s.

The four were chosen from a field of 50 applicants for the second round of proposals. Three of the four new selections will be produced by independents. Three of the six previously awarded projects are independently-produced (some are submitted by stations, which take an overhead fee and provide certain services).

Details of the Fund's procedures were published in the last issue of *TELEVISIONS*.

The Pilot for a video series on images and issues of the handicapped is available from its producers at Portable Channel, Rochester, N.Y. The program was aired this spring over WXXI-TV in Rochester. Contact John Camelio, Portable Channel.

Sarah Needham is a ½ hour video portrait of a handicapped woman artist living in Woodstock, N.Y. The tape, produced by videoartists Dean and Dudley Evenson, portrays the artist at work, dealing with her life and family. Contact Evensons, c/o Costello, P.O. Box 21068, Wash., D.C. 20009.

The Directors Guild of America is holding workshops on each coast for its membership on "The Impact of Video on the Film Industry," organized by Gene Youngblood. Subjects include production, distribution and display. Speakers include a variety of industry types from broadcasting, cable, production, satellite, cassette, and disc companies. New York workshop is tentatively at the Museum of Modern Art Oct 7-8. Los Angeles session is Saturday mornings for four weeks beginning Sept. 10. at DGA headquarters. Contact DGA: (213) 653-8052.

The Cauliflower Alley Tapes is the title of a 50 minute video portrait of Hollywood's Cauliflower Alley Club whose members are retired boxers, wrestlers, and movie heavies. The tape is by California "artist-anthropologists" Lowell Darling and Ilene Segalove. *The Cauliflower Alley Tapes* was featured, along with an array of movie and television photographs and memorabilia, in Part 3 of the Southland Video Anthology of the Long Beach Museum of Art (Jan.-Mar. '77).

Darling describes the videotape as "a portrait of some of the greatest fighters of all time as well as an important aspect of the Hollywood film phenomenon." He says, "these guys portray an entire segment of the type-cast system: the heavies. They pounded and pulled each other into some of the most unforgettable images of the cinema, creating faces that are part of our collective unconscious. ... They are sculptors."

The videotape allows Cauliflower Club members to present themselves, filling in their portraits with songs, jokes, re-enactments, and reminiscences.

An array of impressive documentaries, many independently produced, are on the list of hopefuls for the *Documentary Showcase* at PBS. No firm commitments have been made, and most deals are either in negotiation or await funds from CPB. While a PBS staffer tells *TELEVISIONS* that "we might wind up without any of these," the following are among the programs under consideration at present: *Harlan County, U.S.A.*; *Pumping Iron*; *The Poisoning of Michigan*; *The October Crisis of 1970* (the Canadian FLQ kidnapping); *Reach for Tomorrow* (Japanese thalidomide scandal); *Union Maids*; *California Reich*; *Inside San Quentin* (a video work by producers working out of Marin CVC); *Men of Bronze*; *Hyde Park*; *Showdown at Hoedown*; *500-Mile Sculpture Garden*; and *Equality in the 200th Year*. Decisions must be made by August 1 on at least part of the schedule which would begin in October.

Video documentaries received their fullest screening yet at the 3rd Documentary Video Festival, held by Global Village on three weekends in May. More than 40 different documentaries by producers around the country were screened, including some well-known works which have been aired on public broadcasting, as well as projects which were designed for close-circuit viewing. A catalog and press-release are available from Global (454 Broome St., NYC 10012). Four hours of selected works were cablecast on both Manhattan cable systems in June.

The full schedule included:

Bodybuilders, Greg Pratt, Jeff Strate, University Community Video; *Giving Birth: Four Portraits*, Julie Gustafson, John Reilly, Global Village; *The Trouble I've Seen*, Phil & Gunilla Jones, Ithaca Video Project; *Guadalcanal Requiem*, Nam June Paik with Charlotte Moorman; *In the Grand Manner* (The Gina Gachauer Master Class), Northstate Public Video, Paul Edwards, Richard Ward, Edgar Woodward; *Women/Ministers*, Nancy Rosin, Christine Long-Walker, Portable Channel; *Denise Hawkins Incident*, Carvin Elson, Visual Studies Workshop; *Campaign for America* (An Electoral Collage), Evan Kaeser, Marc Levin, Susan Cooper.

San Quentin, Richard Harkness, David Lent, Jack Burris, Clint Weyrauch, with Marvin Community Video; *Loops*, Media Ranch, Inc.; *Two Hundred Years*, U.S. Video, Vito Brunetti, Jeff Kleinman, Jerry Feldman; *The Police Tapes*, Alan Raymond and Susan Raymond; *My Father*, Shigeko Kubota; *Jigling*, Skip Blumberg; *Sedgelyield Hunt*, Bob Wiegand; *So Far So Good: At the People's Inaugural*, Videopolis.

The Magra, Pierre Falardeau, Julien Poulin; *Reel West*, Suzanne Tedesco; *Dead Action*, Optic Nerve; *Five Day Bicycle Race*, Image Union; *Chinatown*, Downtown Community Television; *Remote in the Third World*, Tom Morey; *A Day Without Sunshine*, Robert Thurber, Nancy Thurber, Robert Stulberg; *A Matter of Size*, Joan Lapp, Michael Morton; *Paper Roses*, Maxi Cohen, Joel Gold, Videopolis; *Castor Ayala*, Mask Maker, Edin and Ethel Velez; *Larry Goldman Works*, N. A. Diaman; *Kathleen Spival: Morning Is My Best Time*, John Keeler, Ruth Rotko; *Care and Ferd*, Art Ginsberg.

Selected Documentary Works from Global Village's Workshops: Debi Moore, Claudia Lorber, Susan Landry, Bohdan Chomut, Vivki Papazian, Par Sloan, and Members of Electronic Editing Class; *Project Elan*, Cara DeVito, Ellen Hyker, University Community Video; *Parent-Newborn Bonding: The Leboyer Approach*, David Klot, M.D.; *No Nukes: Seabrook, 1976*, Tobe J. Carey; *Via San Gennaro*, Patrick Domain, Mark Loete; *The TV Family*, Victoria Costello, Larry Kirkman; *Vendage*, Esti Galili Marpet, Bill Marpet; *Trident*, Jean Walkinshaw for KCTS/Seattle; *She Has a Beard*, Norma Bahia Pontes, Rita Moreira; *Participation*, Woody & Steina Vasulka; *Happy Birthday America* (Cape May, N.J.), Maxi Cohen, Joel Gold, Bill Marpet, Esti Marpet, Video Repertoire, Ltd.



Maria Bernardi, former wrestling champion, is secretary of the Cauliflower Alley Club, subject of a 50-minute tape by Ilene Segalove and Lowell Darling.

REVIEWS

"The TVTV Show": Behind the Scenes and Between the Lines

By SKIP BLUMBERG

It followed the late news on the NBC stations in the time slot normally filled by *Saturday Night Live*. It was about television, but more than that it was television.

Snappy Hollywood music and a shot of a TV antenna on the roof of a typical American house opens the show. Inside, a guy, a regular American TV viewer, is relaxing, watching a police show. Roof light flashing, a squad car is speeding down the street. Suddenly there's shooting. A gunman, smoke curling from his cigar, aims from the screen and fires directly at the viewer. Bullets spray from the set, striking objects in the viewer's living room. Shots hit the couch, a lamp. With a disbelieving look on his face, the viewer dives back behind the couch to avoid the bullets. It's *The TVTV Show*, according to the title which has its own applause track; then it fades into the first commercial.

"When the diaspora came, a lot of people went into art, some went into documentary, and TVTV went into commercial television," says Michael Shamberg, the executive producer of the show, an officer of TVTV, Inc., and the gunman in the opening sequence. TVTV is rooted in a collaborative style of documentary video production which germinated in the late 1960's. In early TVTV productions, a permanent staff arranged the production and brought the documentary to its completion, but relied heavily on other independent video pro-

ducers for material and ideas. The first TVTV shows were for cable TV; the next several were for public television. Then they got their independent foot in commercial television's door with the Bob Dylan special, *A Hard Rain*. Now they have become another hustling Hollywood production company trying to break into commercial television. Their success so far may be attributed in part to their aggressive ambition in an aggressive industry. *The TVTV Show* was a pilot for a late night series. For many reasons and by many standards it didn't make it. But they have not given up.

The show dealt with a fictional local news team, with a few of its viewers, and with the events of a day that brought them together.

"You know they are basically dishonest on the news and that's really the way things are," is one of Michael's statements about the show. But as a satirical analysis of TV news, the show rarely got beyond the personalities of its characters and it avoided industry and management issues entirely. In one section, when the news director of the station (the only management character) lectures the squabbling news show hosts — "I don't decide (what should be on TV), the people who own the station don't decide, the public makes the choice!" — it was difficult to determine whether it was satire or propaganda.

Compared to *Supervision*, the serial on the history of television that TVTV made for

the *Visions* series on PBS, *The TVTV Show* was better and worse. Actually whole segments of the *Supervision* script were duplicated in *The TVTV Show's* more polished production. *The TVTV Show* was slicker, smoother, more consistent — with stronger shooting and editing. *Supervision* went further into extremes and was more often authentically funny. Perhaps you have to be an extremist to be funny. *The TVTV Show* did have its jokes: I found it funniest in the mock instructional TV show, "Japanese TV Repair with Momo." The bartender of the TV-projector-equipped Tune Inn played by Kate Murtog, was a likeable, sympathetic character. Billy Murray, as the news team camera operator, was true to life and comfortable in his part. And the situations as they developed were neatly designed. I didn't mind its real time rhythm and I definitely appreciate a good joke. However, as an entertainment show, it was amusing for about the first half hour and then only occasionally, and as a satire, it wasn't exactly dense with things to say.

Allan Rucker, TVTV, Inc. President, and co-producer of the show said that he, "... wasn't crazy about it. The pacing was off. The situations were good but there weren't enough laugh lines. It seemed to drag ... it was partially due to the writing, partially to the directing." And how did the network become involved in the production? According to Allan "they were as easy to work with as anyone who we've made a show for before. The network had approval over writers, the cast, the director ... and there were some differences of opinion. Changes were made over certain people in certain roles (after the network people were showed audition tapes). But pretty much they let us make all the decisions."

Fortunately for them, TVTV has a friend at the network. Paul Klein, NBC Vice President for programming, is their champion and is actively ready to take chances with them in hopes that they will produce something new and commercially successful for the network. When he was buying programming for Public TV, he had commissioned TVTV to do the Superbowl show. Now at NBC he had asked them to develop this show as a pilot. How did he like the final product? "It was terrible," says Klein. "Maybe about the same, maybe it was better than their Academy Awards show. It was an attempt. You play ball, you play ball for the first time and you come up with one sparkling play and five errors. You learn. It takes time. Unfortunately it's a terrible medium. It's a popular medium. You have to appeal to people who have terrible unsophisticated taste. By even standards of *Saturday Night Live*, it was terrible ... *Saturday Night Live* gets a low rating but it gets a high rating for a key audience ... This stuff is not for the lady in Idaho or the man in Iowa. Their eyes don't move fast enough for fast cuts. They get headaches from hand held. They watch TV for peace and quiet, for the big head, the comforting voice, the slow built story ... and they buy products. They have to have their teeth held to their gums and, since nothing for that works, you're constantly selling. You're constantly selling cosmetics. You're constantly selling cosmetics because none of them work ... But they'll feel terrible if they hear I said 'terrible.' Disappointed is more like I mean. Actually we're doing something else with them. We'll take what they did right and make it a half hour."

What was wrong with this show? "It did not have sustained audience drive. It didn't do what it set out to do ... to be an examination with humor and wit of TV's effect on American life. It didn't do it. It's harder to do than they thought. You can do it badly and make a lot of money. It's called *Network*. That's shit, it's fake realism. It's for people who think they're sophisticated, but they're dumb. They put things on their car ... Actually, I didn't see *Network*, I never see industry stuff ... But *The TVTV Show*, it didn't do anything. It laid there. It wasn't parody. It's hard to do."

And what suggestions, what help did he give? "Me? If I could make TV I would. They make money. A guy who makes television shows can buy and sell me everyday. The network is a packager, a deliverer. I could have a truck. There's plenty of money in the industry but not for the employees; for the people who make the shows."

Meanwhile, despite the fact that several reviewers praised it and several million people saw it, the pilot was not picked up as a series.

"We're just keeping our head above water," according to Michael. Several irons are in the fire, for both commercial and Public TV. But TVTV feels that Public TV has given up on them, and they've grown tired of unreturned phone calls and the like. According to Allan, "they've done an enormous amount for us, especially WNET, but it didn't build into a continuing relationship. I tried, I tried. I sent in two proposals to the CPB Revolving Fund ... one about high school kids' life style (with Billy Adler) ... another with Peter Hliddal about a Coast Guard Captain in Newport, Oregon ... a local hero ... both proposals were rejected ... We'd love to work with Public TV if there was more money and more commitment ... but right now we'd prefer to work with commercial TV. For the money and leverage Public Television gives you, it's really a painful process — the way they develop ideas ... the distance between people. And there's no system for dealing with producers on a continuing basis. They don't seem to be interested in non-fiction series and that's the only way we can build on what we've done. We can't sustain ourselves on a special basis ... and then we've changed ... we're interested in crossing the line to working with actors and directors. We learned a lot doing documentaries and we'd like to apply it to entertainment."

Michael concurs; "you know in our documentaries we gravitated more and more to entertainment. They became more about people and we got into ways to present

this point, still somewhat hushed up, it deals with fictional characters who live in a media environment. On it they hope to work with one inch vtr's.

They're also developing a made-for-TV movie for CBS about the 1960's, and a feature film about Neal Cassidy and Jack Kerouac. Meanwhile, according to Michael, "we're broke. All we have is just enough to develop productions and we're living on credit cards. We're taking a gamble and when a project comes through and we're in production we hope it'll all pay off."

They might be surprised to get what they want. As long as Paul Klein is reigning over NBC programming, they certainly have a greater chance than most independent producers. "I think eventually they'll make it," says Klein, the person whose instincts determine the schedule for NBC. "They're trying to become legitimate. I don't know if it's a good idea. They're trying to become legitimate but they have a problem. They're doing a new kind of programming (for network television). It's hard to retrain people's eyes ... It takes a little time for their time to come ... When Michael writes his ideas, they're good. Not his dialogue, but ideas. When they put it on tape it's not right. It didn't come out right this time, another time it'll come ... If I hadn't come to NBC, I would have gotten something for them. But now I'm at NBC and they've got a big time agent. It makes them in the big time — with back end deals and negative cash flow guarantees. It makes you like the big time. It makes you like a big time studio. And that's what I hope they become: a big time studio."

They have molded their new organization along the traditional, hierarchical, formalized system of an independent TV production company. They have essentially cut themselves loose from any obligation to work in a collaborative, organic, democratized production pro-

"You know they are basically dishonest on the news and that's really the way things are," is one of TVTV producer, Michael Shamberg's statements about the show. But as a satirical analysis of TV news, the show rarely got beyond the personalities of its characters and it avoided industry and management issues entirely.

people. Real people are part myth and only part reality anyway. We wanted to create our own people. You get tired of other people's lives, being a voyeur. And then this is a way of making a statement. You know the way they use characters on TV ... first there was Archie Bunker, then the Fonz, and then Farrah Fawcett."

However, the production of *The TVTV Show* just about broke their bank account. It was paid for at late night rates but it was shot like a feature film — a lot of details, one-line takes, lots of cuts. When you're spending \$350 an hour for on-line editing time, each edit costs a lot of money. Although budgets are always a problem, in this case the budget was tossed out the window at quite a financial loss to the corporation.

However, doing *The TVTV Show* taught them their way around the network. Different problems brought them to different departments within the network hierarchy ... departments that they found often had no idea of what was going on at the other end of the organization chart. They developed a respect for Paul Klein's sense of what the mass audience will and will not watch. In addition, they found another deal at NBC. This one will be a prime time comedy — at

cess. They're not working especially with friends; it's on a pay-as-you-go basis, and if they've got the bucks, they'll work with the most talented Hollywood professionals. They haven't produced a completely successful mass audience product, but they have attracted notice in both the network and the press. They have the privilege of developing their own projects independently, free of the network structure, and they have the support and assistance from NBC's chief of programming. Yet, if they do it at all, they will be returning to the independent producers and artists, who in past productions have been the source of many of the ideas that are new to network TV, from a more distant place. And, in the game they're playing, the ultimate test of their shows will be the ability to attract a mass audience. I will tune in to their next televised episode with great interest. Yet I have found the behind-the-scenes reflections of *The TVTV Show* much more revealing about television than the show itself.

Skip Blumberg is an interviewer and producer. Currently he is an artist in residence at WNET-TV.

A Midwife's View of Three Tapes on Childbirth

By PAM BESCHER

Giving Birth by Tobe J. Carey, B&W, 23 minutes, 1971-2.

Giving Birth: Four Portraits by Julie Gustafson and John Reilly, Color, 60 minutes, 1976.

Earth Birth, Sky High by Dean and Dudley Evenson, B&W, 30 minutes 1976.

If you want to see a mother giving birth in a hammock (why a hammock), or some nice shots of a baby emerging from a mother (the crowning of the head is beautiful), then see Tobe Carey's *Giving Birth*. If you expect much more, forget it.

I made the mistake of inviting my 14-year-old female neighbor to watch *Giving Birth* with me the first time I saw it. I thought it would give us a chance to talk about the benefits of natural childbirth, but the tape is definitely not good for a young girl to see as her first view of birth.

In fact, I'm not sure that anyone pregnant or potentially pregnant should see the tape unless it's to find out what *not* to do.

One major problem is that there is not enough explanation of what is happening to the mother and why. The voice-over is dull, monotone, and the dialogue is not very informative.

What we see is a mother giving birth on a hammock. The position looks comfortable for labor but not very satisfactory for delivery. There is no force that the mother can push against. She's not grounded!

I think the parents were not prepared as well as they should have been for the birth. By their own admission, there were things that they would have done differently.

It is quite disconcerting to see the mother obviously in pain with no redeeming factors. Pain is ok if we can see a reason for it. But, this mother did not even reach for her child after delivery. People around her seemed happier about the birth than she did.

The mother was having trouble pushing out the baby. She was in a awkward position, with nothing to push against, and she was pushing incorrectly, with very little coaching from anyone during this stage. Consequently, it hurt.

The mother says "Oh, God, No," and "pull it out!" and "Am I broken?" During one of these tense moments the tape cuts to show a man looking on calmly smoking a cigarette. Ludicrous!

Earth Birth, Sky High is a spiritual statement of the human, earthy act of giving birth. The mother explains, "we believe each birth is the birth of a Christ-child." We see great care go into the preparation for this child. There are shots of the mother doing exercises, nude, on a beach, diving into the water.

The delivery is totally controlled. The mother is in a hands and knees position with her back toward the camera. We see the baby only after birth. Therefore, this would not be the tape to view to see how a baby is born, with the stretching, etc.

It is worth seeing the beautiful calm of the mother, as she makes suggestions to her birth attendants and talks calmly through the entire delivery.

There are a few tense moments after the delivery, before the baby begins to breathe, but it makes the relief and joy felt with the baby's first cry even greater.

After the birth, an obstetrician discussed his view of home birth. Generally, he feels it's not safe. I appreciated this addition of reality because all births do not belong at home; just as all do not need to be in the hospital.

Giving Birth: Four Portraits is professional, beautiful and realistic. What is the birth of a human baby like? Facts are that it is different for each mother, each couple, and each child. This tape shows us four portraits of women giving birth under very different conditions.

Each of these parents had classes in the Lamaze method of childbirth. Every other tape or film that I have seen, and there have been hundreds, show only limited aspects of the birth experience. This tape shows us a hospital delivery, a home delivery, a "C" section in the hospital, and a Lamaze delivery in the hospital with a midwife presiding.

The first delivery was at the hospital where the mother had been given a regional anesthetic, an epidural. Here we see an accurate picture of what most hospital deliveries are like.

We see the doctor applying the forceps and cutting the episiotomy. With an epidural the mother cannot feel how to push or when and usually needs help in getting the baby born.

The obstetrician is interviewed after delivery and he sings the praises of the epidural anesthetic. Although the epidural is a fine anesthetic when used because of necessity, it is not as harmless as he tries to tell us.

Recent studies of newborns and babies up to age 18 months show that those children whose mothers received epidurals still showed the effects of the anesthesia 18 months later. (see *Anesthesia "Maparidine Effects on Infant Behavior"* by Abramson, MD, and Brackbill, PhD.) These measurable after-effects, although not life threatening, are usually unnecessary.

The second portrait is of a fourth child, born at home. The parents explain why they want to deliver their child at home. Scenes of their family with the three children going about their daily activities is a lovely sequence.

Frederic Leboyer, MD, author of *Birth Without Violence* is interviewed. Dr. Leboyer states, with his usual clarity and simplicity, that birth is not a surgical process, that it is a very natural process.

The birth sequence is warm and relaxed. The father is right there breathing with his wife, wiping and cooling her face. The baby, being a fourth, is born quickly and easily and is given right to the mother. Quiet prevails, lights are subdued. Leboyer's voice is saying, "the new baby is like a guest in our house and should be treated like a guest."

The third portrait is a first baby to Lamaze trained parents. We see them in class. Margaret Mead is interviewed and talks about birth practice choices.

After eight hours of labor and no progress, there is an emergency C-section performed.

We see the father right after delivery. He is ecstatic.

Unfortunately, this mother was not allowed her baby for three days after her delivery. She could not breastfeed nor could the normal mechanisms of maternal-infant bonding begin. The mother tells us that she wanted her baby right away. Actually, there is no reason why a mother who has delivered by surgery cannot begin breastfeeding almost immediately.

In portrait four, Elizabeth Bing, author and childbirth educator, speaks about training for childbirth and how the anticipation of pain could make pain inevitable. It's true. The last portrait is in the hospital with a midwife presiding.

This tape as a whole is a celebration of birth, with the sequences well chosen to leave us emotionally high. The tape catches the beautiful and natural simplicity of mother and father working together in the birth of their child.

Pam Bescher is a midwife and a bio-energetic therapist.

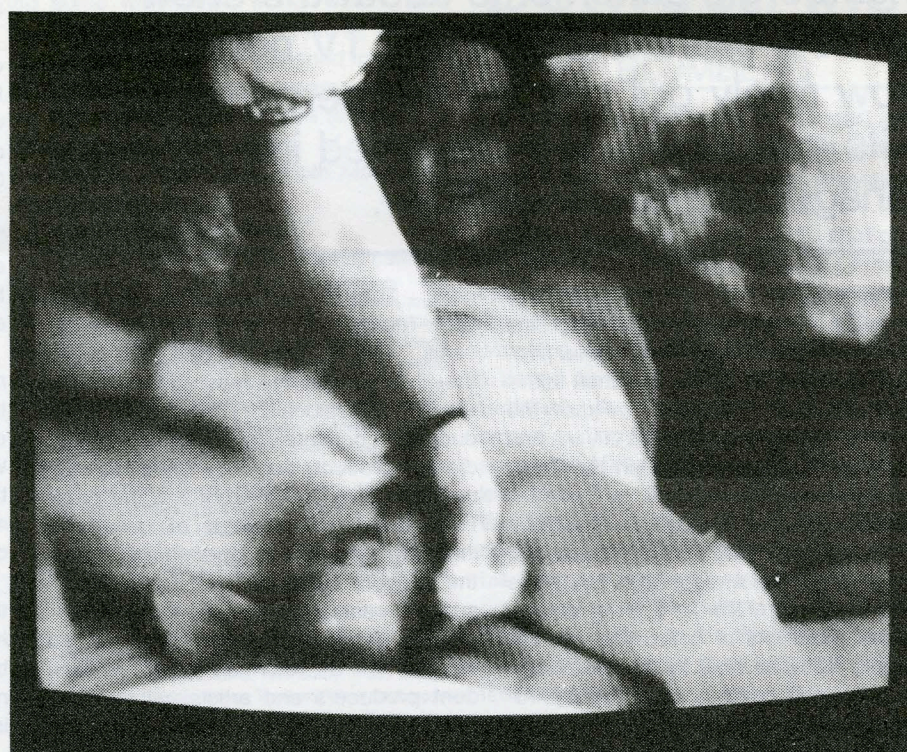
These tapes are available from Electronic Arts Intermix, 84 5th Avenue, NYC 10011.



Giving Birth by Tobe J. Carey



Earth Birth, Sky High by Dean and Dudley Evenson.



Giving Birth: 4 Portraits by Julie Gustafson and John Reilly.

The father is right there, breathing with his wife, wiping and cooling her face ... Quiet prevails. Lights are subdued. Leboyer's voice is saying, "the new baby is like a guest in our house."

English and 3rd World Sources; Old Time Radio

ACT has published a new book: *Promise and Performance: Children with Special Needs*. It is a series of twenty-five articles written by broadcasters, educators, and researchers, dealing with the image of the disabled in the media. It also includes articles about children in hospitals, mental health and parenting. Order from ACT: 46 Austin Street, Newtonville, Ma. 02160. \$6.95.

Filmwomen catalogue of 150 films and videotapes is available for \$1 from them at 490 Beacon Street, Boston, Massachusetts 02115.

The Educational Film Library Association (EFLA) has published a handbook on 16mm Distribution for independent filmmakers. Information in the book on university distribution, network and cable TV, periodicals that review independents, sources of mailing lists make it useful for videomakers, particularly the chapters by David Stewart about public TV markets, and Fred Wiseman on contract negotiations and legal matters. Order from EFLA, 43 West 61 Street, N.Y., NY 10023 for \$6 prepaid.

Two publications are available from the Ford Foundation. The first, *Current Interests of the Ford Foundation, 1976-1977*, is a description of all the areas the foundation is currently funding. It also lists some specific projects. *The Ford Foundation Activities in Noncommercial Broadcasting, 1951-1976* is a history of foundation activity. For copies write to: Ford Foundation, 320 East 43 Street, New York, N.Y. 10017.

The May-June, 1977 issue of Foundation News has an article on the Vanguard Foundation. To improve giving to Third World Communities, the foundation is establishing a separate community board that will control 50 percent of the foundation's funds. The board with a majority of third world members will make grants to communities as they see fit.

"The Future of Public Broadcasting" is a 372-page paperback that brings together an anthology of new and previously published views about various elements of the public broadcasting world, including identity, station relations, instructional programming, public involvement, special audiences, audience research, programming procedures, the SPC, PTV and new technology, and a bibliography. Cost: \$6.95 (prepaid, includes handling and shipping. Billed orders do not.) From: Aspen Institute Publications, P.O. Box 1652, Palo Alto, CA 94302.

Legal Help for Visual Artists is a new handbook offering advice on copyright, sales, reproduction rights. Contact: Kim Mills, 212-725-7775. Hawthorne Books, Inc., 260 Madison Ave., NYC 10016.

A Video Handbook for Libraries: A Look at What Milwaukee Has Done. A case study of the Milwaukee Public Library's video involvement. The major portion of the booklet describes: techniques of effective programming, descriptions of major supplies of videotapes, copyright and duplication issues, video cataloging, staff training and an analysis of the equipment they purchased and how to use it. Available from: Input Community Video Center, 1015 West Mitchell St., Milwaukee, WI. 53204. \$2.

AIRWAVES is a monthly magazine for old time radio show collectors. They have a catalog of old radio shows. Each tape is guaranteed to be the highest quality. . . . Series include: Broadway Is My Beat, the CBS Escape series, and Amos and Andy. They also review new nostalgic radio books and have a technical information column as well. The issue I read had instructions on how to build a high frequency filter. For the show they are highlighting in an issue, they provide a log listing all known broadcast titles. They also have a free collectors column where you can place your ad for old western radio shows, etc. For more information write: AIRWAVES, 438 W. Neptune, NIU, Dekalb, IL 60115. \$6 year.

Millimeter's June issue is a video special with mostly technical articles from inside the rapidly merging film and video industry (the publication goes to people involved in making commercials). Hence an agency survey on film vs. tape—the subject of the magazine's look at NAB. Also: how features are slowly coming to tape; electronic animatics for test spots; a camera survey; videocassettes and the mentally ill; a story on *The Police Tapes*. (12 East 46th St., NYC 10017.)

The Clearinghouse on Development Communication publishes a quarterly newsletter, *Development Communication Report*. Find out how media is being used in developing countries: projects using audio cassettes to train Guatemalan women in rural areas about nutrition, a project in Ecuador training a rural radio production team in methods of formative evaluation, as well as sources for further information. The materials put out by the British Council are particularly interesting. These include *A Catalog of Radio and Television Training Materials from the United Kingdom*, and an annotated listing of 200 audio-visual and print materials for use in training radio and television personnel. They also produce a series of radio training kits. Write the British Council, Tavistock House, Tavistock Square, London WC1H 911, England for more information. To get on mailing list for newsletter: Write to Development Communication Report, 1414 22nd Street, N.W., Washington, D.C. 20037.

Bristol Channel and Community Television, is a history of one of the five cable systems licensed by the Ministry of Posts and Telecommunications in Great Britain. The author, Peter M. Lewis, argues that the most important aspect of this cable experiment was the scale of the operation, the participatory style of programming and co-operation with organizations and individuals who took advantage of the stations. The publication is available free from: IBA, Fellowship Scheme, Independent Broadcasting Authority, 70 Brompton Road, London, SW3, England.

For more examples of English cable programming, "Local Cable Television: Alternative or Dead End?" is an article in the Spring 1977 issue of *Sight and Sound* magazine. It describes six cable experiments in local programming and analyzes why some succeeded.

The Spring 1977 issue of *Sight and Sound* also has an article on television drama titled "TV Drama: The Case Against Naturalism."

Britons have released two major studies on the future of television: the massive 500+ page *Future of Broadcasting* is a report with recommendations by the Annam Commission (headed by Lord Annam), which covers the waterfront: new technologies, programming issues, industrial relations, etc. Cost: 7 pounds, 25 shillings from U.K. booksellers in the U.S. or from Her Majesty's Stationery Office, 49 High Holborn, London, WC1V6HB.

The 1977 BBC Handbook, while smaller (200 pp), is a well-written presentation of the state of the present BBC operations, and a projection of the network's future. Cost: 1 pound, 50 pence, from BBC, 30 Marylebone High St., London W1M4AA.

The pitfalls of education, and instructional technology in particular, are described in an excellent case study of American Samoa by David Gillmore, who worked on the original plan to establish an educational TV system to assist islanders in making the transition to modern society. "Education in American Samoa: The Way it Was, The Way It Is" appeared in the March-April issue of *Public Telecommunications Review*. Claiming massive waste of public funds and almost total failure to achieve the educational objectives, the article describes how the government-run system has degenerated into programming that is primarily U.S. commercial fare.

SURVIVAL

NEA's Media Arts; Focus on Women

The revamping of the National Endowment for the Arts media grants program, which has been underway since Brian O'Doherty replaced Chloe Aaron as Director in July, 1976, is virtually complete, although some details were still pending at *TELEVISIONS'* deadline.

Formerly called "Public Media," the program is now titled "Media Arts: Film/Radio/Television."

Final guidelines were distributed to previous grant applicants in May for four panels with the earliest deadlines. The full guidelines will be printed and distributed over the summer for all programs. Details and changes in programs include:

Regional Development: This major NEA category has been split into three separate panels, Major Media Centers, Aid to Film/Video Exhibitions, and In-Residence/Workshops. The split was caused by the enormous growth of the field, which in some areas was spawned by the NEA's program itself. The so-called major media centers (deadline: July 15) are the large operations (Museum of Modern Art, Media Study, etc.) with \$150,000+ budgets, that perform at least four projects, including exhibition, production and post-production, workshops, services, collections, regional coordination, distribution, etc.

The Exhibition program offers up to \$15,000 to groups exhibiting film/video at least twice a week (deadline: Aug. 15). The Residency/Workshop program allows organizations to invite film and videomakers, radio producers and critics to teach and create. Stipends at \$1500 to \$7500 are available. (deadline: Oct. 25)

Production: As reported last issue, a new category has been created to grant non-profit producers up to \$50,000 for individual programs. (deadline: Nov. 1)

Services to the Field: Another new category, forged from remnants of several which were discontinued, services include conferences, research, distribution, informational materials, individual services, provision of facilities and work spaces. Up to \$25,000 can be granted for the combined activities in this panel. (deadline: Aug. 1)

Programming and the Arts: This category which funds major series and pilots for television that deal with other arts will no longer take applications. Instead, all series will be developed on NEA initiation. Reasoning was that many programs funded in the past were not high enough quality to justify the size of the expenditure.

Media Studies: Discontinued, with its functions dispersed to other categories.

General Programs: The catch-all category that covers items that don't easily fit into other areas, the panel will continue to review individual video artist applications, although with some changes.

In the past all applicants, who would apply for \$10,000 non-matched grants, submitted directly to the media department. Now, documentary and narrative videomakers will continue to submit to Media Arts (deadline: Jan. 1, like all General Programs), but the other artists—synthesizer, installationists, etc.—will submit to Visual Arts Panel (deadline: Oct. 1). Eventually, a joint panel will be established to consider all videoarts, but this couldn't be done soon enough to make this year's deadlines.

State Film: Set up during the pre-Bicentennial flurry, this program will operate for one more year, offering \$25,000 matched grants to state and regional arts agencies for arts and cultural films. Deadline is not July 1, as previously announced. No date has been set.

NEA/CPB Public TV Residencies: This program will be discontinued. If offered arts residencies to filmmakers (last year to videomakers, too) who worked at public TV stations for a year. The grants were \$40,000-plus.

American Film Institute: Despite growing opposition at Congressional hearings to AFI's monopolization of film funds to promote a very narrow segment of the filmmaking community, the NEA-funded agency will continue to be subsidized. AFI administers NEA-backed grants to filmmakers.

The total Media Arts budget for FY 1978 is an estimated \$7.6 million, although the figure can change during the year. So far in FY 1977 \$6.9 million have been expended, with all major panels having met. The final total, however, is likely to change by the end of the new federal FY in October.

Focus on Women lists programs and research funded by the Education Division of HEW for FY 75. The booklet shows the variety of programs the Education Division is willing to fund: everything from "Effects of Social Class Background on the Career Commitment of Women Attending Non-Elite Colleges," to women's studies programs, to "Leadership Development and Training for Low Income Women."

Several funding sources operate under the Assistant Secretary for Education, including the Fund for the Improvement of Postsecondary Education, National Center for Education Statistics, National Institute of Education, and the Office of Education. Under these major headings, are numerous other agencies and department, rich funding sources. Write: Assistant Secretary for Education, HEW, Washington, DC.

For \$200, you can join the Foundation Center Associates Program to get everything you ever wanted to know about foundations. The non-profit Foundation Center, in addition to providing a toll-free WATS line for answering your questions, also provides a news bulletin, mail service, copying, computer searches, and a library research service. You can find out just about anything you need to know: from foundations in Pittsburgh, to health research grants in Florida.

But there's a charge for everything. Computer search print-outs run \$10 a subject, while searches from The Foundation Grants Data Bank start at \$50 for up to 75 grant records. Write: Associates Program, The Foundation Center, 888 Seventh Avenue, New York, NY 10019.

Office of Communication, the United Church of Christ, has come out with another excellent booklet: *Parties In Interest*. Subtitled "A Citizen's Guide to Improving

Television and Radio," it describes the machinations of the FCC, and what citizens and public interest groups can do to affect those processes. It includes lists of addresses and publications the activist would want to know. Write: Office of Communication, UCC, 289 Park Avenue South, New York City 10010.

A casualty of citizen apathy and the venality of the cable industry—that's the depressing conclusion about the public access movement to cable TV. Culminating with the industry's successful push at the FCC to postpone the requirement for public access channels on all cable systems, access operations have tapered off since they were first championed in the early 1970s. Since the FCC action last April, many channels have curtailed operation or lost financial and other support. While access still flourishes in many communities, it is often at the whim of the operator.

TV/Media Grantees

\$45,000 from **Heinz Endowment to Family Communications**, Pittsburgh, Pa., 12/8/76. For development of Old Friends, New Friends television production for older adults.

\$12,500 from the **Sloan Foundation to Dance Notation Bureau**, NYC. Toward support for technology in the arts as it related to development of computerized system of dance notation. 12/15/76.

\$20,000 from the **Rockefeller Brothers Fund to Volunteer Urban Consulting Group**, NYC. For Group's arts services component which makes available to nonprofit cultural organizations skills in systems and financial analysis, accounting and personal and production management. 11/17/76.

\$52,000 from the **Corporation for Public Broadcasting to Kit Laybourne for MEDIA PROBES**, a series exploring the influence of communications on contemporary society.

\$129,400 **LSCA** (Library Services and Construction Act—USDHEW) to the **San Francisco Public Library** to develop a "popular Media" center in a branch library. The funds will also be used to develop a media literacy demonstration project.

\$2.7 million **Supplemental Appropriations** signed by May 4, 1977 for further development of "Over Easy", a public television series for the elderly.

CALENDAR

June 17-19: San Francisco Gay Video Festival — May 15th preview deadline. Contact Lisa Baer or Tony Diaman. 631 Castro Street, San Francisco, California 94114 or 415-552-5452.

June 15-July 15: Academy for the Performing Arts. American University. Mid-June to Mid-July. Guest artists for the first two weeks in July: Allan Kaprow, Peter Kirby, Pat Molella.

June 20-22: Two-Way television: A case study. A workshop seminar sponsored by the Alternate Media Center, New York University School of the arts. June 20-June 22. First come, first serve basis. \$175.00. For more information call Ms. Mary Piskorski, The Alternate Media Center, 144 Bleecker Street, New York, New York 10012 212 598-3338/9.

June 25: Celebration of Cinema Arts, including video, holography, synaesthetic process events. Film Workshops of Westchester, 40 Cottontail Lane, Irvington, NY 10533.

Aug. 1-4—Washington-based *National Commission on Cooperative Arrangements* conference on community colleges and telecommunications. Crown Center, Kansas City, Mo.

Aug. 22: "Freedom vs. Control: The U.S. and World News Flow", Association for Education in Journalism, School of Journalism and MassComm, 5115 Vails Communication Hall, U Wisconsin, Madison.

Aug. 25-28: Second annual Chicano Film Festival, Oblate College Centro Video, San Antonio, TX.

Summer 1977: Director's Workshop Session 2 summer, 1977. \$75.00 course fee. A company of professional actors and actresses will be a part of the workshop. First come and first serve basis. Send check to John Hiller, Project co-ordinator FIVE 99 Prince Street N.Y.C. 10012.

Last Thursday, every month: Filmwoman Video Series, at Off the Wall, 861 Main St., Central Square, Cambridge, Mass.

Future International Industrial Television Association. 1978 Conference March 27-31 in Kansas City. At the Multi-media Forum. Contact: International Offices: P.O. Box 297, Summit, New Jersey. 07901-USA 201-273-6437.

B-cast Hiring, Radiation, Ford-NEA Fund, Texas, And the Indie Awards

Charging the FCC with "benign neglect" in enforcement of its equal employment opportunity rules, a coalition of national civil rights and media reform groups, including the NAACP, NCCB, NOW, and the National Latino Media Coalition, requested on April 20, that the FCC institute an investigation into the hiring practices of 295 television/radio stations, nationwide.

The petition, which in some cases asks for outright denial of a TV/radio license to operate, represents the first nationwide effort to challenge broadcasters.

Large media corporate headquarters, such as Metromedia TV are also being brought into the inquiry. The petition

charges that while Metromedia TV serve a community which is 29.8% minority, it has no women/minority employees; other blatant examples included in the petition were WGLI-AM, Babylon, New York, 41% minority population-no minority employees; and WPVA-AM, Petersburg, Virginia with 34% minority, no women/minority employees.

Nolan Bowie, counsel for the coalition, predicts that the petition will result in "substantial upgrading of all TV/radio stations, and continued efforts of the group(s) involved to speak out for media reform."

The filing includes extensive employment statistics for all stations and station groups, including public TV and radio. The

filing is available from Citizens Communication Center, 1914 Sunderland Pl., NW, Washington, D.C. 20036.

"The Housing and Community Development Act of 1974: Promise and Practice" is the name of an hour investigative videotape on special revenue sharing and its effect on inner-city communities. Produced in B&W 1/2" tape by the Southern Resource Center in Dallas, the program has been shown extensively in neighborhoods there and on KERA-TV, the PBS station.

The group is now distributing the tape for rental and sale with an excellent 32-page public policy handbook on federal housing politics. Funding for the project came from the National Endowment for the Humanities and Texas Committee for Humanities and Public Policy.

The Texas Committee is providing support for Southern Research Center's current project, in conjunction with the American Indian Center—"Rosebud to Dallas: The Reservation Indian Relocates in the Urban Environment." This will be an hour doc shot in 3/4" color.

For rental or information write Sarah Crone, Jed Riffe, Robert Rouse, or Cynthia Mondell, SRC, 2516 Maple Avenue, Dallas, TX 75201. (214) 745-1109.

Television can represent some hazard to human health for both the people who work with it and the people who watch it. Experiments are now underway to determine the extent of that hazard.

Caution: TV may be hazardous to your health will be a videotape that what is known about the biological effects of television. Now in development stage by Parry D. Teasdale, a member of Media Bus, the tape will explain in graphic detail the physical phenomenon of TV from the camera to the eye, making it clear where and why researchers are concerned, and it will probe the possible consequences that these investigations may lead to: a more restricted use of our most popular medium.

The three major areas under investigation are: the biological safety of television transmission; the safety of the TV set itself; and, the physiological effects of prolonged TV watching.

The necessity of address these questions now is brought on not by ecological hysteria, but by the fact that Congress is currently rewriting our communications law. The biological safety of TV should be in the public consciousness during this process. Says Teasdale: "It is altogether fitting that, after living in our homes for more than two decades, television should be the medium to investigate its own safety."

Media 77 workshops began June 4 in San Francisco, and continue through July 6. Aimed at community groups, the 12 sessions cover a wide variety of subjects, including management, fund-raising, board-building, how to use professionals, PR, local media outlets, political and historical perspectives, the media industry, print images. Details and results from: Juana Samoyoa, Media Interchange, 1523 Mozart St., Alameda, CA 94501.

"The long-range goal . . . is to acknowledge the independently produced documentary as an important art form and to encourage the provision of permanent outlets for this work," concludes the new letter of solicitation for an independent documentary production fund by the Ford Foundation and the National Endowment for the Arts.

The letter, which was mailed to non-profit groups in the field on May 17, is the second try in a year for the two foundations, which announced their intentions to begin financing documentaries last June amidst intense speculation and confusion. Confusion grew throughout the year as the selection process bogged down, the project was delayed, attention turned to the

CPS-PBS "Revolving" Documentary Fund, which began offering grants in Jan., 1977.

Deadline for the Ford-NEA request for proposals was July 1.

NEA and Ford are looking for a non-profit institution to administer the \$500,000 total that the two groups will provide for the first year's experimental operations, which would begin Oct. 1. The agency would offer "an experienced program administrator" who would be advised by a three to five person panel, which would specifically include documentary film and video artists, persons with "broadcasting credentials" and a member of the PBS programming staff.

Grants would be made twice a year in amounts as small as \$5000 or as much as \$100,000 for film or video programs in a format that can be boosted to PBS technical standards (half-inch is specifically mentioned). The main objective is to fund new work, but completions and acquisitions "may be desirable."

Unlike the CPB fund, artists would retain full copyright and ownership of the work.

The main change in this RFP from last year's attempt was the elimination of a matching provision. "After two meetings, it was concluded that the (last) letter resulted in applications that were unduly complicated in terms of administrative organization and that the matching fund requirement excluded many applicants."


No public TV stations applied last year, which were specifically mentioned in this year's RFP. Many observers believe that Fred Friendly and others at the Ford Foundation were distressed that no outpouring of PBS station applications was received for this project, unlike previous Ford-backed PTV efforts.

Video made an appearance at the 7th Arden House on public TV and independent film. Funded by NEA and CPB, the 6-day session is organized by International Film Seminars on the model of the "Flaherty Seminar" for independent films. Some 90 invited guests look at material non-stop from 9 a.m. to 11 p.m. and talk with the producers in an invitation-only environment at the palatial family estate of H. H. Harriman, now owned by Columbia University. Program planner was Jay Ruby of Temple U. Video constituted roughly one-fifth of the 52 pieces screened and included *Giving Birth* and *Politics of Intimacy* (Global Village); *Media Burn* and *Eternal Frame* (Ant Farm); *Police Tapes* (Alan and Susan Raymond); 4 pieces by Woody and Steina Vasulka; *Airwaves* by SC PTV; *Video Trans Americas* by Juan Downey; excerpts from Uganda footage by People Communications Network; and *Union Maids*, a film using videotaped interviews by Jim Klein, Miles Mogulescu and Julia Reichart.

"Indies" may not be "Oscars" or "Emmies", but the awards, given by the Association for Independent Video and Filmmakers, constitute the only peer-group recognition for people working in the media as independents.

Top honors were awarded at a capacity banquet in April to Barbara Kopple for *Harlan County, USA* and jointly in video to Jon Alpert & Keiko Tsuno for *Chinatown* and *Cuba, the People* and to Alan and Susan Raymond for *The Police Tapes*.

Others receiving Indies, which are actually "I" beams mounted on a wood block, include: our own, Nick DeMartino for services to the field; Manny Kirchheimer, filmmaker/teacher; Shigeko Kubota, video maker and curator, Anthology Film Archives; Tom Luddy, Edith Kramer, Pacific Film Archives; Ed Lynch, founder of AIVF; Larry Mischel, negative cutter; Dan Sandberg, TVC Labs; Peter Schnitzler, Ferco Co.; Bill Sloan, Donnel Film Library; Alice Spivak, acting coach; Tim Timpanero, EUE Screen Gems; Barbara and Willard Van Dyke, International Film Seminars; Irwin Young, DuArt Film Labs.



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SOCIAL SERVICE

Video Validity in Social Science Survey Research

Interviewer training and reporting results

By DIANA CAPMAN DOLAN

Ever since the Kennedy administration, survey research has played at least some role in policy making at the federal agency level. In the late Nixon years, the role became more symbolic than real. Nonetheless, a precedent had been set for listening to social scientists during the federal decision-making process.

One of the earliest uses of social science surveys was to illuminate the issue of school desegregation. Such research was used to demonstrate that black children in the South could learn if the schools they attended were brought up to some minimum standards.

As social science survey research has acquired the dimensions of big business, Congress, the executive agencies, and the White House have become more responsive to survey results in justifying/determining social policy.

At the same time, however, it has been getting increasingly more difficult to obtain survey data with decent reliability and validity. Disillusioned interviewees have become recalcitrant, giving interviewers more and more insincere, capricious or incomplete responses.

Simultaneously, it has become essential to acquire good data because we are at a point with the new administration when policy may change in response to data.

A major research project undertaken for the National Institute of Education showed that video could dramatically increase both

reliability and validity of data gathering and data processing.

In 1973 a national study of school achievement was initiated through the Institute for Research on Poverty at the University of Wisconsin. Funded by N.I.E. the study was designed to refute the notion that inherited individual differences, particularly those referred to as I.Q., are a major factor in school success. The major investigators were myself and Richard E. Whitney. Larry Kirkman, with John Hunt and Peter Kirby, produced the videotape materials.

Our theory was that social class, race and sex and indirect advantage derived from those variables accounts for the lion's share of the differences. We felt that awareness of how the educational system operates is the most potent weapon a child can have to compensate for a disadvantaged position.

We also thought that if these variables were carefully measured most differences in achievement would be accounted for without introducing I.Q. variables.

It seemed appropriate that in a study in which "awareness" was considered the most powerful tool for combatting a disadvantaged position, videotape should be employed to make study participants aware of the results. Video was used to combat class bias in the training process, as well.

The first hurdle, and one which defeats many large survey operations, is gaining the confidence and commitment of the in-

terviewing staff. Most of us who have conducted successful field operations have run ourselves ragged trying to be at all of the research sites at once in order to gain that commitment.

Through video we were literally able to be everywhere at once. In each training session we showed a tape introducing the researchers and explaining the purpose of the study.

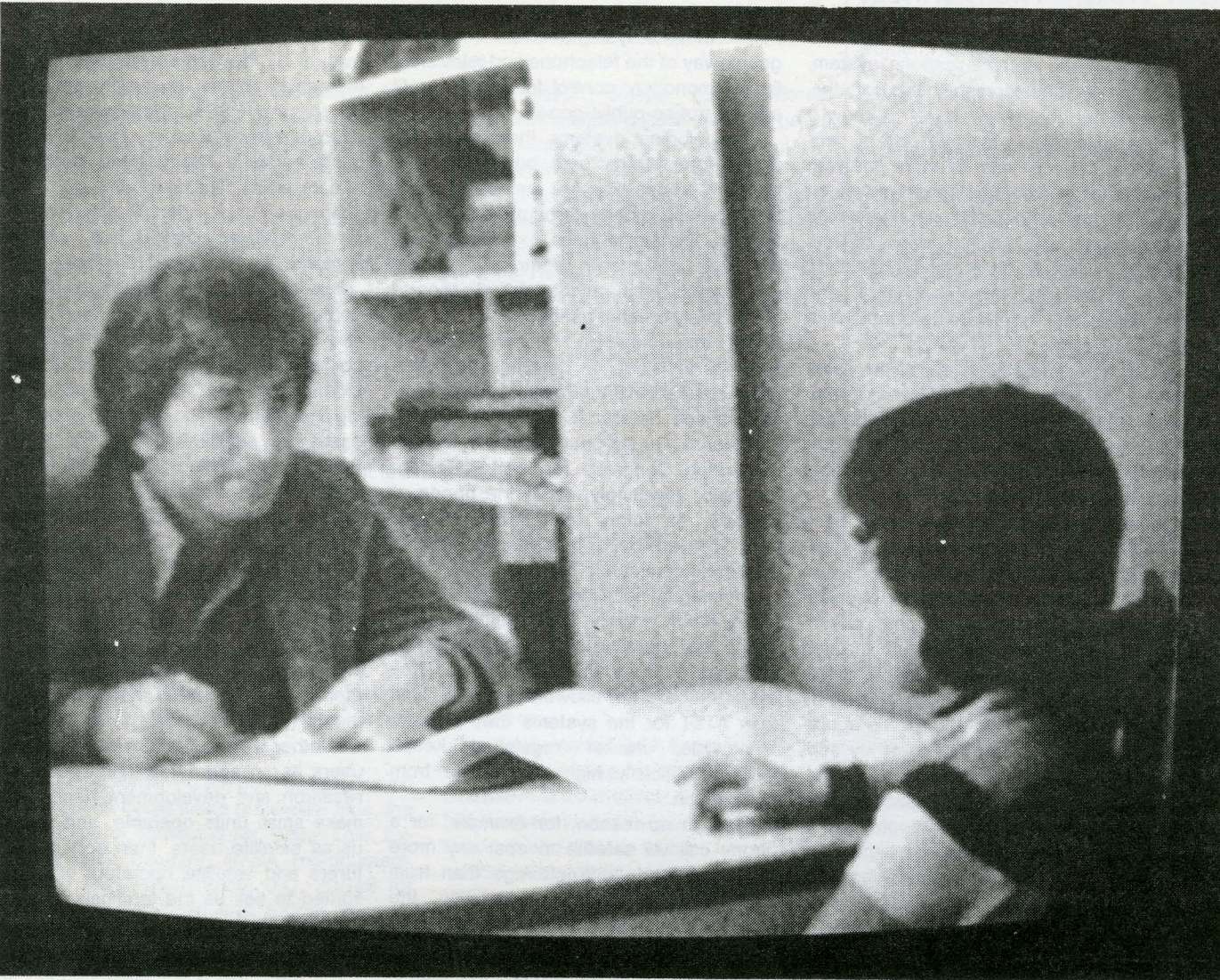
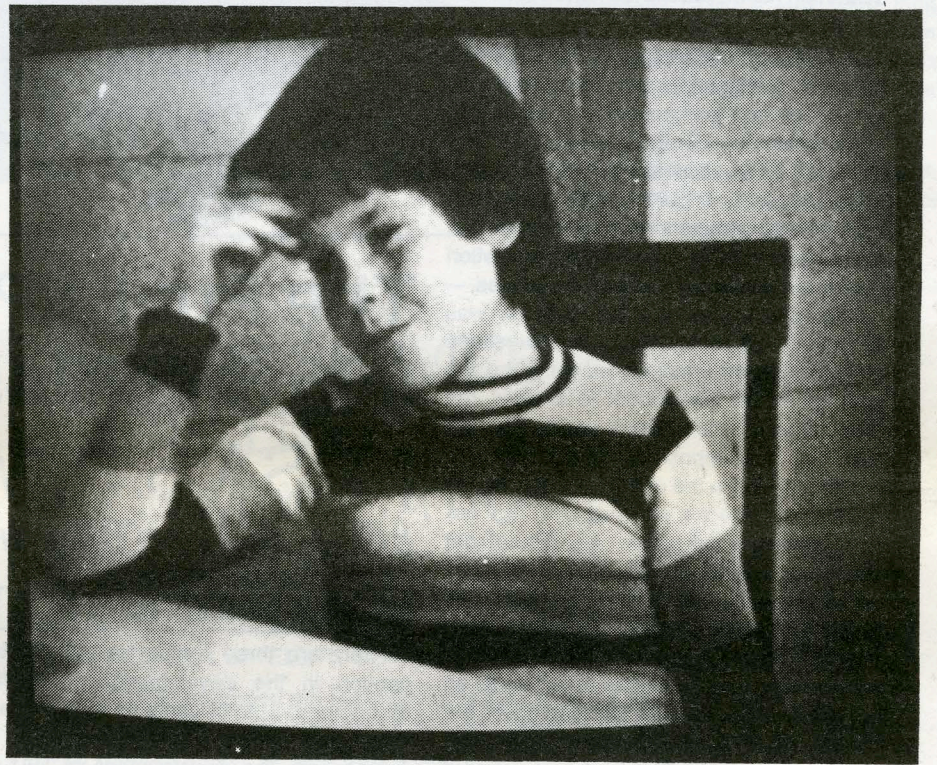
In the training tape we discussed the ways in which this research could be *different*, more useful in part because of video.

We then showed a taped sample interview using particularly appealing interviewees. This allowed the interviewers to

hear the interview read correctly. It also made the purpose and effectiveness of the interview clear, so that interviewers believed in the interview.

In the next training session we showed general tapes explaining how to interview and exploring sources of interviewer bias. In subsequent sessions we had the interviewers interview one another with portapaks and then broke into small groups to critique each tape.

The distinct advantage of this training procedure was that it allowed us to train interviewers without relying heavily upon their reading skills and it thus lessened the bias toward middle class interviewers.



PHOTOS BY LEONARD RIZZI

It has always been difficult to train working class interviewers. It is essential to do so, however, in order to obtain valid interviews from working class people. Many researchers have given up using interviewers of the same race, sex and social class as the sample. In so doing they seriously compromise the validity of their data.

After an opportunity to see themselves on tape, many of the poorer interviewers dropped out. This lessened the painful task of firing people who cannot learn to interview.

There are always interviewers who are "hotshots" and feel they need no training. Seeing themselves on tape, the hotshots quickly became more humble and open to instruction. The process also allowed supervisors one last chance to identify potential trouble spots in the interview and interview them with the interviewers.

The real triumph came, however, when we told interviewers we would bring back videotape reports to be shown in each community where the research was conducted. For once there was a *realistic* promise of tangible results which could be made. This promise allowed us to gain the support of the most politicized interviewers, who in turn could get interviews from the most alienated potential respondents.

A videotape report assured accessibility to the results for *all*, regardless of their education or reading skills. The research could thus be expected to have at least one immediate and direct effect on the level of information some people had on how the educational system operates. The

interviewers could readily imagine how this would work having just used the video in their training. The commitment of the interviewers was infectious.

When the field survey was completed we went back to each research site with a preliminary tape explaining the theory behind the study and presenting some data from our pilot study. We defined the concepts we had used and described the ways in which we had measured them.

At this point we asked people to contribute questions they hoped to have answered by the research. In this way we tried to make our final data analysis responsive to the needs of the participants.

At the close of the study we returned again with a tape summarizing the results. Again we asked for comments, criticisms and questions which might have been raised by the research. Taking this material into account we prepared a final conclusion to the tape and distributed completed copies to each school system.

Three of the five school systems requested, and received, permission to use the tapes as a part of their orientation and training for new teachers. All of the school systems have requested and received copies for their libraries.

The effect of videotape on the quality of the data is difficult to quantify adequately, since it is next to impossible to get quality control data from comparable studies.

We do know that survey methodology texts estimate that between 60 and 80 per cent survey completion is about what can be expected. In this study the completion rate was over 95 per cent on all samples.

This means that once an interview was begun, it was completed. Any questions which were left unanswered reflected the inability of the respondent to answer, not the failure of the interviewer to ask the question. It is impossible to put numbers on that change in the *quality* of the data.

Our own checks showed over 95 per cent reliability but, again, we cannot get data from comparable studies. We had no refusals among the students and no refusals by parents to grant interviews with their children. There were some parents with whom we were unable to schedule an interview due to peculiar working hours but no one refused permission to have their child in the sample. This is almost unheard of in survey research.

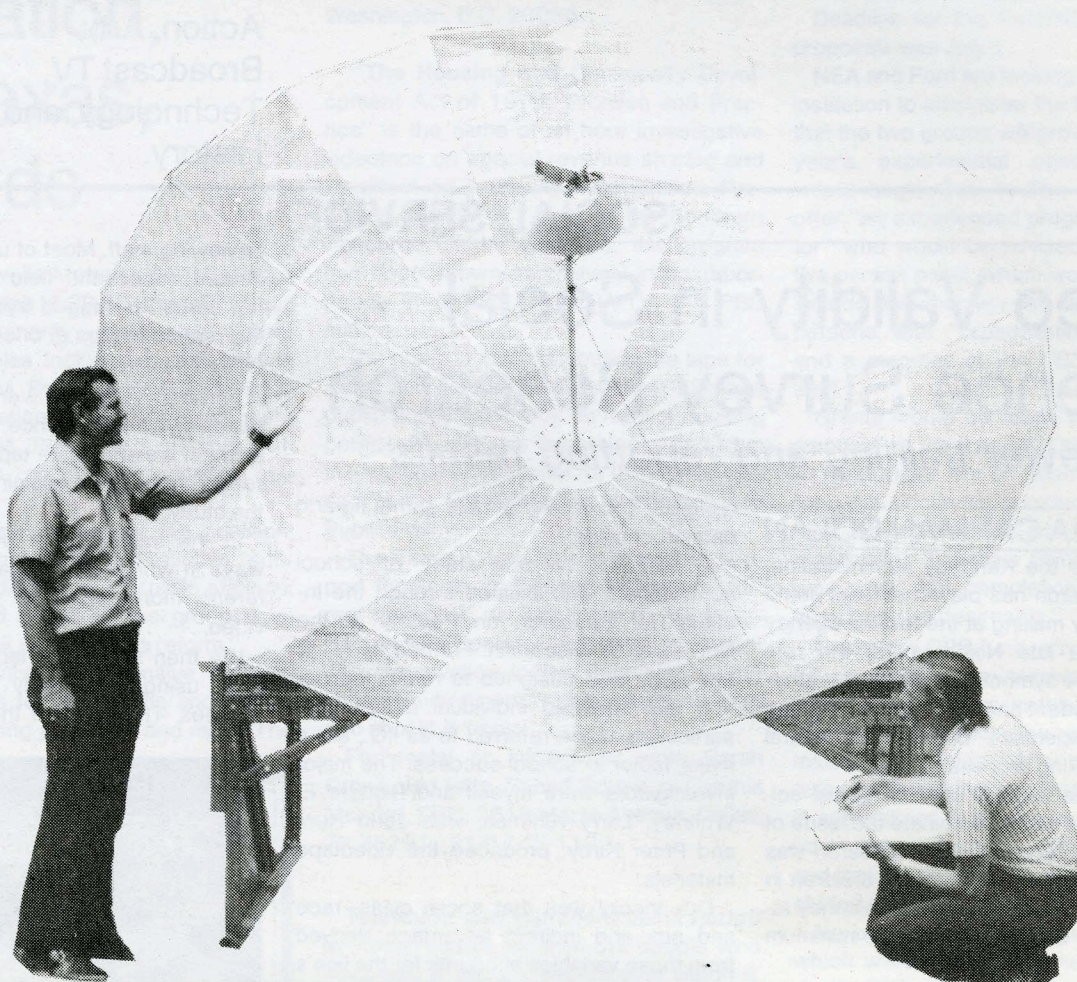
It seems likely that our success can be attributed partly to the interviewer training, which did not weed out the working class interviewers. In several instances working class people became our best and most productive interviewers.

Other researchers have used video as a result of this research. Mathematica of Princeton, New Jersey, developed a set of training tapes based upon our original work which they used in a national study for the Labor Department. The tapes they developed, produced by Larry Kirkman and Peter Kirby, were distributed to the Census Bureau and the Department of Agriculture where they are being used to train interviewers.

Neither Mathematica nor the Federal agencies have adopted the concept of reporting the data back to the participants through video. Nevertheless, what they have done can be expected to enhance the quality of their data considerably.

In the coming year the report tapes from the School Success Study will be distributed for use at the fall teachers in-service training institutes which are sponsored by state teachers associations in most states. Once again those who participated in the research will see that *this* research is not simply being "filed" or worse: used solely for the academic advancement of the investigators.

Diana Capman Dolan is a research associate at the University of Wisconsin's Institute for Research on Poverty. Formerly, she was a research sociologist at O.E.O. Research and Plans in Washington, D.C.



The Public Push Into Satellites and NASA'S New Role in R&D

Industry eyes the public interest market

By JAN ZIMMERMAN

There are three routes for public intervention in the development of satellite technology: 1) to become an experimenter on an existing NASA satellite; 2) to get involved with the development of NASA's Public Service Communications Satellite Project, and 3) to participate in a growing locally based public lobby to alter the structure of the communications system, regulation and development in this country.

One of the best ways to get to know a satellite intimately is to have one of your own, or at the very least to share one with a few friends. NASA is now loaning time on ATS-1, -3, and -6 to public users who wish to experiment with social service application. \$80 billion worth of subsidy enabled NASA to develop this technology, and made it possible for private corporations to rip-it-off for profit.

NASA has almost gone out of the satellite business, though. Under Nixon's "open skies" policy of 1972 — anyone who can afford a satellite, can have one — the development of communications satellites was left to the private sector.

Several forces are pushing NASA back into satellites, however. Because private industry halted the research needed to develop evermore flexible and sophisticated satellite tools it wants the government to make R&D investment through NASA contracts to private industry. In this way development costs are subsidized by taxpayers who are then offered the opportunity of paying for the service they subsidized.

The last decade has witnessed the phenomenal growth of a highly sophisticated satellite system. It will soon be capable of direct satellite-to-home transmissions.

Accompanied by the development of low-cost computer terminals and micro-electronics, this system represents an awesome alteration of technology to handle concepts of simultaneity and ran-

domness with the ease that systems formerly handled linearly-directed communications.

The vulnerability of these systems to change results, in part, from the rapidity of their development. No one, as yet, has been able to establish unilateral control over new communications technology. The problem for citizens is how to intervene before satellite systems have a chance to go the way of the telephone and television: limited monopoly control for private profit and the not-so-public-good.

Technological systems themselves are not preformed structures, but creations of political processes. As the government heart pumps money through the satellite system, industry's lungs expand mightily with the windy rush of contracts — financial oxygen for the marketable devices to meet falsely created needs.

The importance of citizen input in NASA's decisions on satellites now was made clear at NASA's Public Service Communications Satellite Conference (PSCS) last March. Public satellite users, already pressuring Congress for NASA funding, can also, unwittingly, serve the needs of industry. As future experimenters were told, "You are being groomed as a future market for commercial satellite time."

Commercial satellites, whose high rates make them virtually inaccessible to the public are operating at 2/3 capacity. The suppliers refuse to lower their rates. They claim they are not allowed to charge less than AT&T for the systems they provide. Meanwhile, market regulation keeps AT&T's artificially high prices free from competition.

There is no reason, for example, for a phone call via satellite to cost any more from New York to Anchorage than from New York to Boston. By satellite, the distance is the same.

But NASA is constrained by its government charter from running any *operational* service which would compete with any

commercially available satellite service or with the licensed common carrier service (Bell Telephone).

Bell was well-represented at the PSCS conference. During one of the workshop panels on "Systems Concept and Implementation," a Bell spokesman exclaimed, "What these people want is another telephone company and they're not going to get it."

The only way public users will get satellite time, if the commercial system has its way, is if NASA allows us experimental time and trains us to "Step up to the big boys."

At the same time satellite time is going begging for buyers. The hope is that by becoming information addicts we will pay any commercial price to get our satellite fix.

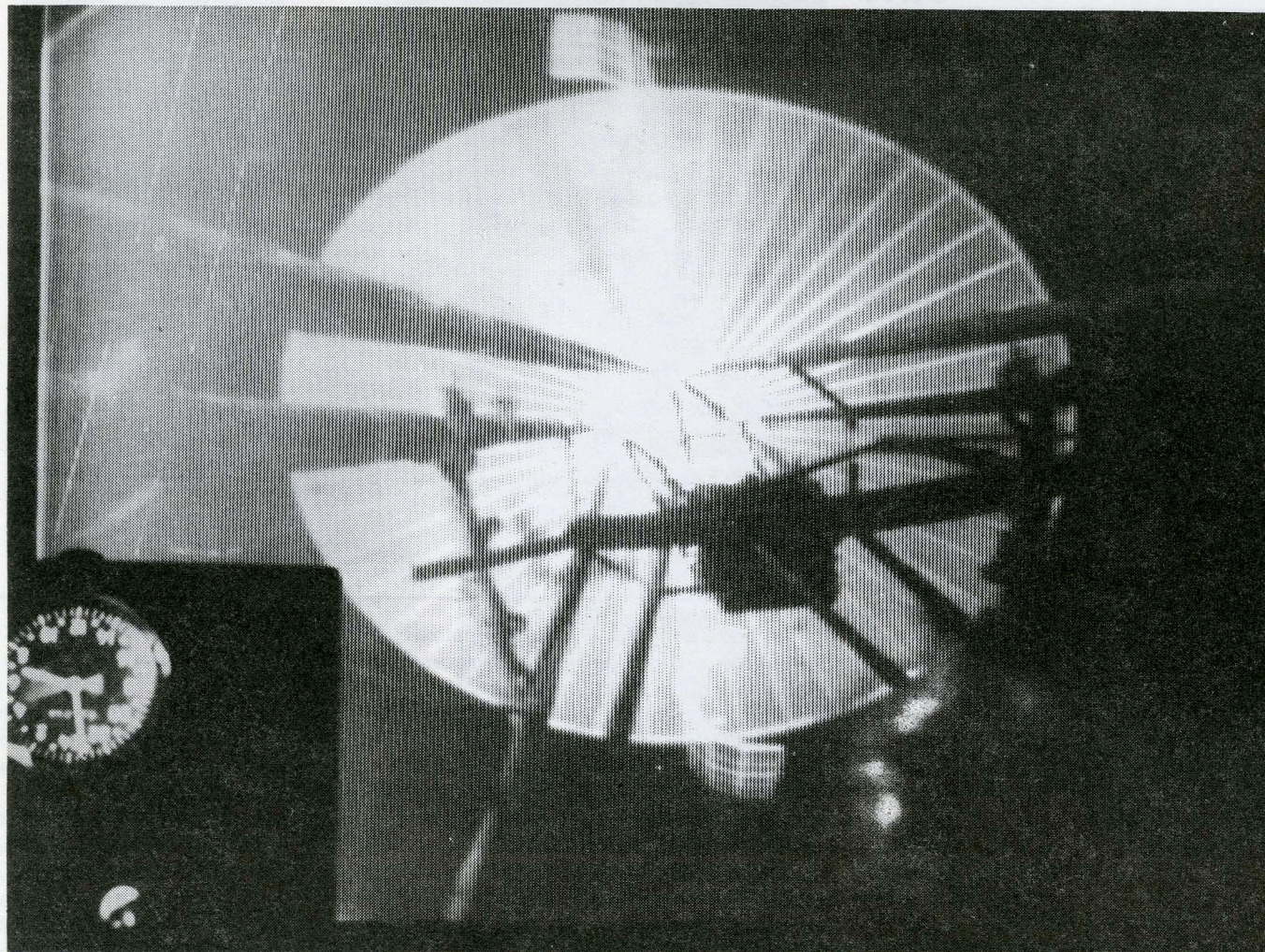
A second level of market mentality was evident at the conference, particularly in the design of the hardware system proposed for the PSCS. Most citizens group users are low-rate users in need of multi-point, two-way narrow band transmission of data, audio, facsimile, telex and/or slow-scan video information. Public users need a high-powered satellite, and very cheap and easy-to-use ground terminals.

But industry/manufacturing reps at the conference wanted NASA to fund research and development of high-band, high-cost color video broadcast terminals. Is it coincidence that ABC, NBC and CBS are forming a joint effort to do their television broadcasting by satellite? Or that by 1978 the Public Broadcasting System will be using WESTAR, the Western Union (ITT) satellite to interconnect its member stations?

Unless NASA develops public users as an aggregate market and funds the research for low cost terminals, no manufacturer will go near the problem. Said a General Electric engineer, "There is no profit in small units, and especially if there's no guaranteed market, the investment's not worthwhile."

In other words, if NASA develops public users as an aggregate market, funds the research and development necessary to make small units operable, and prepares us as satellite users, then both manufacturers and satellite operators will be delighted to sell us the terminals and channels that our tax money paid for in the first place.

It is clear that a complicated, high technology system of high cost, designed to



LEFT: A ground station antenna. RIGHT: NASA ATS-6 spacecraft photographs itself.

PHOTOS FROM NASA

meet the needs of a few broadcasters, is not the same as the design of a cheap system designed for easy public access.

But broadcasters' needs were considered to be of prime importance, even to NASA. Said one NASA panel chairman, "The problems of women and minorities are social problems, not NASA problems." Time and time again public interest groups were told that they were distracting the conference from its purpose of planning a satellite.

A representative from Lincoln Labs at MIT, a major defense contractor, put it succinctly: "We're here to see if we can sell technology, not to talk politics."

Despite its aversion to "social problems" NASA wants to encourage public awareness of the advantages of satellite development. What better way than to get hooked as an "experimenter" on one of the NASA-owned satellites?

NASA offers technical assistance and free satellite time to public users, most of whom could do little more than fantasize about satellite usage without this NASA support.

The first line of contact for any public interest, non-profit organization is the Public Interest Satellite Association (PISA). PISA is the single best source of information and

for ground terminals, personnel training, and operational costs. In order to get "formal" approval from NASA you must have funding. In order to get funding you must have NASA approval. NASA does have a "holding area" category called "conditional" approval which helps to make this paradox resolvable.

Where this money will come from is another question. All the groups PISA addresses have tight budgets.

The National Institute of Education and the Department of Health Education, and Welfare both have monies designated for satellite communication. Most of the monies, however, are earmarked for particular users who already have on-going satellite projects in Alaska and Appalachia. The large and well-established educational and medical consortia, along with public broadcasters, got their hands into the till early.

As a result, smaller public interest groups are trampling each other to get to the leftovers. Many have already entered the NASA fray under PISA guidance. They include: Pacifica Foundation/Federation of Community Broadcasters, Consumers Union, Association of Community Organizations for Reform Now (ACORN), The National Association of Neighborhood Health

Political pressure on Congress and the satellite funding agencies may squeeze more money for satellite experiments.

Additionally, the FCC needs encouragement to better regulate commercial satellite systems, and to establish mandatory lower rates for non-profit users. The Commission also needs to guarantee shared-time on ground stations and satellites constructed with public money to public interest groups.

Long-range goals include:

- Altering the Communications Act of 1934 to protect the public interest in terms of access to and rates for new and existing communications services;

- Changing the charter of NASA or establishing a new agency to provide a publically-owned and operated satellite communications system; and

- Altering AT&T's monopoly over common carrier services

To choose the route of a satellite experimenter is to select a path fraught with the dangers of exploitation, co-optation, frustration, and energy invested with small return. Unless you're an industry beggar in line for government hand-outs, there's "no such thing as a free lunch," as we were often told at the NASA conference. But we've paid for this lunch already and we intend to eat it.

Jan Zimmerman is an L.A.-based video producer active in media affairs for the National Women's Agenda.

PUBLIC SERVICE SATELLITE COMMUNICATIONS EXPERIMENT

TITLE WOMEN'S SATELLITE SERVICES PROJECT

OBJECTIVE Determine the feasibility of linking a non-broadcast satellite with ground systems to create a vital information network among over 100 women's organizations which represent over 30,000,000 women.

JUSTIFICATION The National Women's Agenda Project, which is co-ordinating this effort, represents an unprecedented unanimity of purpose of a remarkable diversity of women. We are hampered in our effort to attain full equality for women in our society by the difficulty and expense of rapid communication with one another. In addition to demonstrating the feasibility of satellite-provided communications services, this experiment would be an unprecedented opportunity for women to gain operational experience with sophisticated technological systems.

BACKGROUND The NWAP has created a Media Task Force in recognition of the importance of having women control communications systems to meet their unique needs for information. Already, many of the affiliated groups commit a large share of their budgets to communications efforts. The NWAP has completed a final experiment design and is seeking funding actively.

APPROACH This experimental model would link the offices of affiliated women's groups in six cities (New York, Washington, Chicago, Los Angeles, Houston, San Francisco) for both inter-organizational and intra-office communications through audio, teletype, facsimile, and computer data services on a scheduled basis. All systems would be two-way. Through this project design we will specifically explore the feasibility of large scale audio teleconferencing, a women's news wire service, large-volume, hard-copy information transfer, and the creation of a computer-based resource/data bank for women. In terms of software, there will be a stress on educational material, on transfer of information needed to achieve program goals, and on items which reach out to the full membership population through newsletters and service projects.

GROUND TERMINALS (TYPES & LOCATIONS) Each city will have a receive/transmit terminal for narrow-band communications. Depending on the location of this terminal, the signal may then be micro-waved into some central point, which will in turn be accessed by each organization through a simple local telephone call. It will be necessary to schedule time consistent with the CTS satellite experiment model.

REMARKS Traditionally, women have been the last to learn about and utilize new technology. This experiment could reverse the "White Rabbit Effect" of running faster and faster to stay in the same place by explosively expanding women's knowledge and skills in using advanced communications techniques. It would be an emphatic end to the game of "catch-up."

PRINCIPAL INVESTIGATOR Jan Zimmerman

ORGANIZATION National Women's Agenda Project/Media Task Force

ADDRESS 142 Hollister Avenue, Santa Monica, California 90405

"There's no free lunch"

- Lincoln Labs at MIT

"We're here to see if we can sell technology, not to talk politics."

- Bell Telephone

"What these people want is another telephone company, and they're not going to get it."

"But we've paid for this lunch already and we intend to eat it."

advice on any aspect of the satellite effort, either as an experimenter or as an advocate.

After determining the best usage your organization could make of satellite time, the next line of contact is Mr. Wasy Lew, Experiments Manager, NASA Headquarters, Code ECS, Washington, D.C. 20546 for proposal guidelines and further information.

The "Catch-22" in this system, is that experimenters must find their own funding

Centers, and the National Women's Agenda Project.

At the moment, NASA approval does not seem to be a hang-up, but money is. One alternative is establishing a co-operative effort to share limited resources like ground terminals and satellite time.

PISA is also trying to alleviate some of the immediate cost problems for experimenters by developing very low-cost, two-way narrow-band terminals. Such an invention could bring the funding prospects within reason.

Spots; The Popular Art of American Television Commercials

by PAT MOLELLA

SPOTS: The Popular Art of American Television Commercials, By Bruce Kurtz (Arts Communications, 14 East 11th St., New York 10003)

"On the average, each American sees 156 spots (television commercials) a day or 1,092 spots a week."

This statistic is one of a cluster in chapter one of Bruce Kurtz's book about the popular art of American television commercials. Kurtz's intent is simply and concisely stated in the preface.

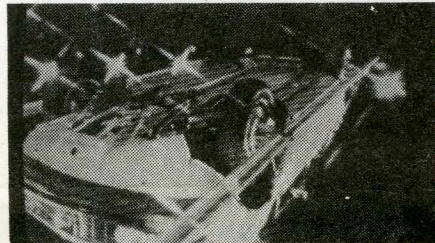
"This book was written with the intention of providing a conceptual framework for

studying and understanding the most pervasive imagery of our culture: television commercials."

Despite the deft concision and simple layout (the reader rarely gets lost in the development of the arguments and propositions) there is an occasional boggle. Although ostensibly aimed at a general audience, the book bows frequently in the direction of art criticism. Kurtz strives to redefine the methodology of the art historical approach to include popular art forms (television ads in particular) and to "eliminate an elitist reading." To accomplish this, however, Kurtz almost loses his general audience to the exigencies of scholarly definition.

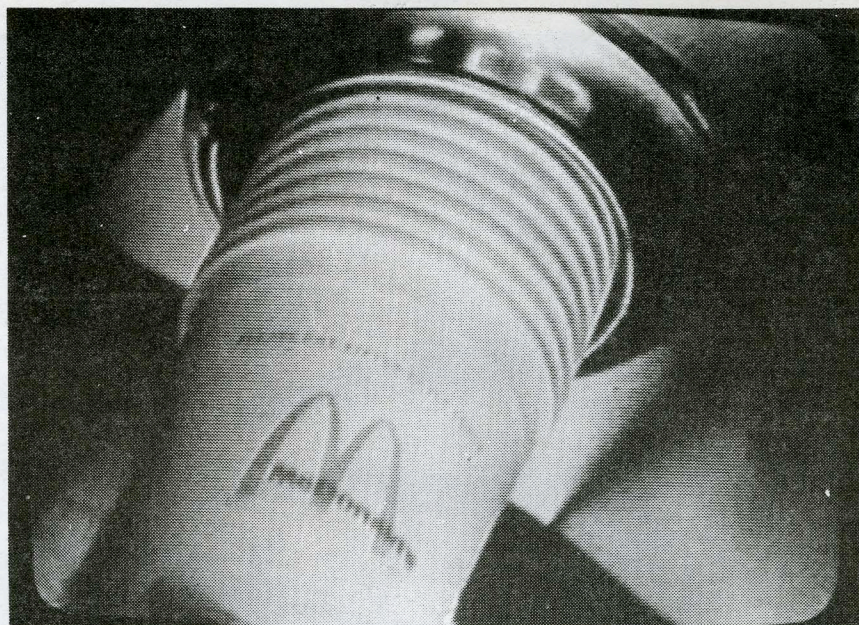


"Eye Opener," director Elbert Budin



"Car Drop," director Ricky Levine

On the average, each American sees 156 spots a day or 1,092 spots a week... spots are the most pervasive imagery of our culture.



PHOTOS FROM SPOTS

"Quick Cuts," director Dan Nichols

The book is divided into four chapters with accompanying interviews of four prestigious and successful directors of television commercials. Kurtz begins chapter one, *Television commercials in America*, with the pervasiveness of television in our lives and then states his intent to determine and define television's cultural status in America. He points to the incredible revenue and therefore economic power TV commercials command and cites McLuhan's statement, "Advertising can be regarded as a profoundly important art form..." and "Advertising is substituting for product because the consumer today gets his satisfaction from the ad, not the product."

This is only the beginning. More and more the satisfaction and the meaning of all life will come from the ad and not the product." Kurtz points to parallel absurdities in other art genres—surrealism in fine art and literature, the juxtaposition of unlike realities, (the willing suspension of disbelief), literary, cinematic, and sculptural likenesses to qualities in "spots".

The chapter ends with an entree to Kurtz's ensuing comparisons. "If justice is to be done to the mass arts which are after all, one of the most remarkable and characteristic achievements of industrial society, some of the common objections to it must be faced." (Lawrence Alloway).

Chapter two initiates the reader to the first of these objections — are television ads art? What is the definition of popular art, what is it worth?—with which Kurtz grapples. He says, "The most essential single difference between fine art and popular art is the self-evident one that popular art must be popular while fine art need not be."

Kurtz describes the different levels of popular art from kitsch, middle brow to high brow and offers a short history of the rise of popular art, its imagery and discriminates the variations in value judgments which affect our perception of originality in works of both fine and popular art.

Chapter three, *Popular Art and Fine Art Criticism*, Kurtz discusses the question of

Scanning the Predominant Visual Imagery of Our Time

An interview with Bruce Kurtz

By NICK DEMARTINO

Bruce Kurtz is an art historian, artist, teacher, and writer. His interests in modern art led him in 1972 to examine several artists whose work in video was being shown at the Castelli Gallery in New York City. Also influenced by documentaries like *Lesbian Mothers*, made the same year, Kurtz published what he calls the first large-scale article in an arts magazine that dealt with video as an art.

"All the others had sort of curiously remarked about the presence of this medium, but nobody had tried to write about it in terms of the methodology of art criticism."

"Video is Being Invented" in *Arts Magazine* became influential in the sparse world of video criticism. That was followed by a cover feature for *Arts Magazine*, a chapter in the *Video Art* book (Harcourt Brace Jovanovich, 1976, by Ira Schneider & Beryl Korot) and a recent piece in *Art in America* called "Artists Video at the Crossroads," which describes distribution outlets for artists video.

The current work, his book and tape about commercials called *Spots*, was supported by a grant from the National Endowment for the Arts, and stems from an attitude towards popular culture and the mass media which he began exploring in the *Video Art* article, a change from his earlier pieces.

On Jan. 25 *TELEVISIONS* editor Nick DeMartino met with Kurtz in his New York apartment to discuss his attitudes toward

video art and popular culture. It was the day before his final copy deadline for *Spots*.



Bruce Kurtz: The thing I did in the *Video Art* book was to deal with commercial television in relationship to videoart and other kinds of art that are related to TV in various ways, especially experiential works and environmental works, because they dealt with a mixture of sensory responses that were other than purely visual.

Fine artists started working in media that combine different sensory experiences as opposed to just purely visual work at around the same time that television became pre-eminent in America, and that's really curious to me.

I'm not saying that it's a cause-and-effect relationship, by any means, but the coincidences are really interesting because that there is a popular art medium developing at the same time which has qualities about

it in terms of experience which are very similar to qualities of experiences that are being explored in fine arts.

Televisions: What qualities?

BK: Specifically is the fact that television is not primarily visual it is audio-tactile-visual, a combination of sensory responses. Also, it's kinetic. Film is primarily visual. Secondly, audio. But I think that television is audio, tactile, and visual, in that order, and kinetic, so it's completely different. The only things they have in common is that they are both kinetic.

The biggest percentage increase in the number of television households in America occurred between 1950 and 1951. It went from nine percent to 23½ percent. In 1952 Rauschenberg and John Cage and others at Black Mountain College put together the very first happening. I find that curious. It was an event that combined the projection of slides of Rauschenberg's paintings, Cage's music, and Merce Cunningham's dance, and a lot of visual and auditory and tactile experiences, all wrapped up in one. It was really the invention of a new artform. And that's an artform that combines audio, tactile and visual experience. Of course in the late 50s and through the 60s, happenings continued to develop, by a big range of artists. And now we have performance. It comes out of happenings, combined with theatre.

BK: But what I'm doing is thinking about television as a medium. When I first started writing about art, my function was to try to make the art more acceptable to a wider audience, because I was responding to works that I had strong feelings about but that weren't widely understood. So I was taking this very specialized experience and trying to make it available to a wider audience, besides accurately documenting

what the work was about and dealing with it in an historical way.

But now, what I'm interested in doing is working in the other direction. Begin with the understood, the frame of reference of the widest possible response to visual imagery, and work from that towards developing perception to more specialized experiences. That's the reason why I'm approaching this study of TV commercials. Television commercials are the most prevalent imagery in America. Everybody knows something about them. I figured out the average in America is over 10 hours a week. There are almost 1,200 of them a week, according to viewing statistics. That's the average TV viewers. And 97.1% of homes in America have TVs, and that the average is 6 hours and 8 minutes a day of watching, or 42 hours and 7 minutes a week, which is more than most people work at their jobs. In prime time, the NAB allows 9½ minutes of commercials and other times it's up to 16 minutes...

I was saying that I'm really interested in the imagery that is most prevalent, and taking that as the... It's the perceptual precondition for looking at that box. No matter what you plug into it, you bring with it previous experiences. You have a decade and a half, at least, of previous experiences with television as broadcast before video ever even came along. And video-artists bring that pre-conditioning to the medium as much as anybody who looks at it... It's interesting that the medium was used first for a popular art manifestation before it was a fine art, which is not typical of fine art media.

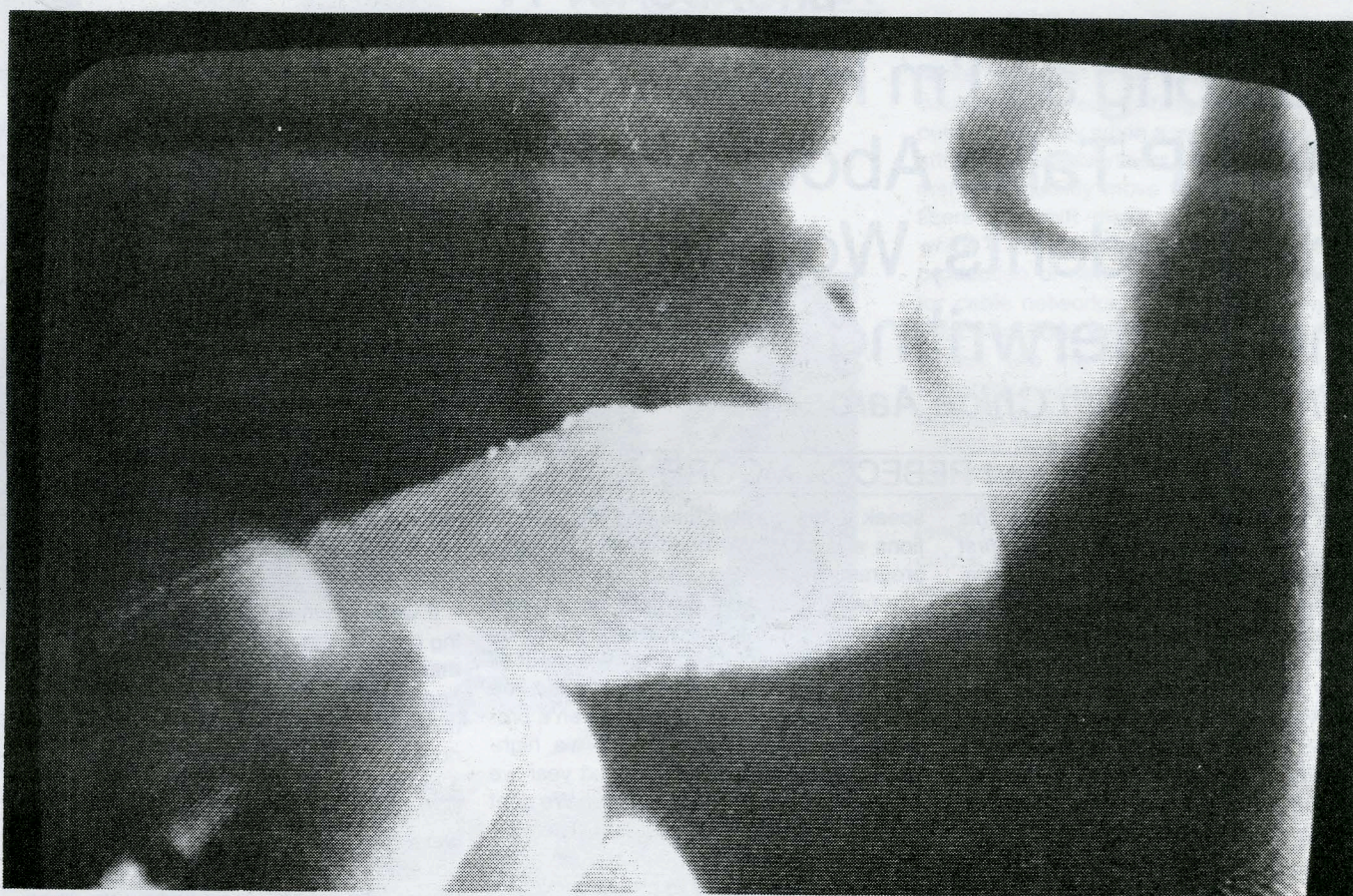
But, if it's true that we go to looking at anything on television with previous experience and all the preconceptions of broadcast television, then we can't really separate the experience of looking at video

value judgments in art and attempts to redefine the role of the scholarly art critic in rendering such judgments. He says we also need to reassess terms such as culture and develop new standards (after Irwin Panofsky, author of *Studies in Iconography: Humanistic Themes in the art of the Renaissance*.) on the basis of recognition of the qualities of original work, free of exterior judgments. Because the body of Kurtz's study derives from this re-evaluation of art interpretation the question of good or bad popular art is moot.

The final chapter of *Spots* deals with the autonomy of the commercial director (just how much control does he have over his creation and what constitutes his originality?) and reworks the basis upon which art historical methodology operates. Kurtz determines that like film directors Goddard, Joseph Losey and others, the commercial director should be considered the auteur or chief contributor to a film and should be judged on the degree to which "he was able to use the expressive potential of film and his own imagination to communicate believably the dramatic material of the script that was given to him."

He is then judged on his use of the formal elements intrinsic to the medium. These Kurtz determined were small scale, short duration, an emphasis of audio, tactile and visual sensory stimuli, a sense of the present tense, repetition, peripheral attention as well as consideration of the character of the audience. "Examining spots as formal structures maximizes their qualities as esthetic experience rather than as sociological or psychological information."

Interspersed with these four chapters are interviews with four top spot directors Elbert Budin, Mike Cuesta, Rick Levine, Dan Nichols and Kurtz's description of the particular qualities each director brings to his production. The range of questions is broad, but most of them relate to the topics Kurtz discusses and defines throughout the book.



"Delilah," director Elbert Budin.

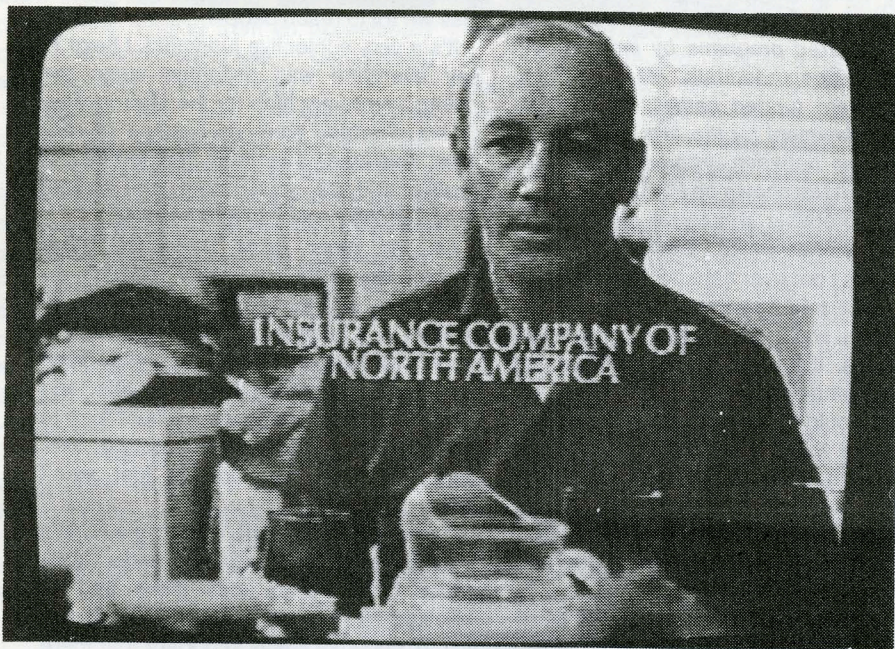
Describing each director's work is a tedious verbal process which relies in part on a certain familiarity with television ads. Fortunately, Kurtz has produced and made available an hour color videotape of both the interviews with the ad directors and selected examples of their work (from Arts Communications, 14 East 11th St., New York 10003). It is almost an obligatory adjunct for someone who cannot quite envision the effect of back lighting on a verbally described scene or a "crown" forming around a cracker dropped into a bowl of soup. The tape alone however,

does not include the esthetic arguments and postulates of the book. They are necessary companions.

This kind of study will doubtless raise the hackles of certain art critics and stir some confusion among a general TV audience who are accustomed to tolerating commercials as the price for a half hour's entertainment. Questions about an ad's ultimate aim are perhaps too quickly dispatched by Kurtz's statement that "probably no form of visual imagery... better characterizes America's free enterprise system of capi-

talism and abundance." (p. 86)

Finally, some may quarrel with Kurtz's underlying as well as stated assumptions about the nature of fine art and popular art, but hardly any can accuse him of overriding the boundaries he set up for the study. "Spots is not intended to be comprehensive or conclusive." Sometimes the evidence fits a bit too neatly into the definitions Kurtz has created, but the interviews are self revelatory and we are, after all, quite familiar with the art he calls popular. The subject is a maverick bull and Kurtz has at least grabbed it by the horns.



"Farm Family," director Mike Cuesta

from the experience of looking at television. You can't separate the fine art from the popular art.

If you're watching video in an exhibition space, then it certainly is predicated upon a completely different set of conditions. One of them, of course, is the condition that one's used to having in a museum, where visual imagery receives the greatest degree of attention. When you go to a museum, you know you should look at things carefully and seriously. So video is a museum predicated upon people being willing to take a look at something carefully and really seriously consider it—we think.

Recently, however, *Artforum* published a transcript of a panel discussion by a lot of important museum directors. They figured out that the average time that most museum transcript of a panel discussion by a lot

of important museum directors. They figured out that the average time that most museum patrons look at a painting is something like 1.6 seconds. The number of people who really seriously look at anything at an art museum or anywhere else is very, very small. It's true that most people look at video imagery in the same way that they glance at a billboard, a sign on a bus that goes by, or, you know, a TV commercial.

I think our patterns of perception are conditioned more by television than any other kind of viewing experience.

You know the other things are beginning to happen on TV at WNET and WGBH where they're doing experiments with programming that is produced by artists that is for a wider audience.

TV: "Collisions" for instance?

BK: Yes, and also possibilities are opening up in cable that indicate to me that there is possibility for a lot more input into network, local and cable programming than there ever has been before. Part of it is because of an awareness, an impact of the people who have been interested in a more humanistic kind of communications have had.

When I started examining television commercials using the methodology of art history, one of the very first decisions I had to make in my own thinking was that obviously if you look at visual imagery of any culture you have to examine it in terms of the values which engendered it. You can't say, for example, criticize ancient Egyptian art because the Pharaoh was an absolute god. You can't use it as a criticism against it because it's antithetical to our own values. You could say that it's a moral copout, because you don't make moral judgments. I'll examine them, find out what they are, consider them, but I won't say those values are wrong.

We've looked at visual art as being engendered by other visual arts. We've done that as art critics and art historians for a very long time. But what happened in the mid-19th century, was that there was this great proliferation of popular art all of a sudden, newspapers, especially. Every great popular artist had caused a great deal of confusion. Durer did a whole lot of prints that were very popular. How do we think about those? Are they posters or are they fine prints? Shakespeare is a popular artist. Was he Rogers and Hammerstein or Dante? What category do we put him into? The same thing happened with film.

But now what we have is electronic popular imagery. It's even greater quantity than any of the mechanically produced popular imagery, because we can reproduce imagery electronically without duplicating.

It doesn't take any more goods or materials to reproduce it 10 million times (once you have your basic hardware) than it does to reproduce it once.

TV: Well, in broadcasting, it takes more electricity.

BK: Yes, that's all. But that's a different kind of reproducibility than mechanically reproduced popular art. That brings us to a point where the predominant imagery in our experience is popular imagery, not fine art imagery. It's a different balance.

BK: Exactly when that balance changed you can't say. It began to change during the industrial revolution, late 17th, 18th century. . . . Popular art began with mass production. It really accelerated in the 19th century with the invention of photography and lithography. Then into the 20th century with cinema, wireless telegraphy, newspapers and magazines, radio, magnetic audio, TV, color TV, satellites, and on and on. The latter part of that list is electronic media.

Art historians, when they look at a period of history, have looked at the predominant visual imagery, that is, until the mid-19th century, until the advent of popular art. And it was in the mid-19th century that came the invention of the notion of the artist as bohemian, working against the mainstream of society. Before that the art that art historians had looked at was the art that had either been engendered by, in the way of commissions, or approved by the leading political or intellectual powers of the time.

The leading powers of our time are economic . . . business. And the most predominant imagery of America is television commercials. But curiously enough television commercials are the most aesthetically discredited visual imagery in our culture, at the same time that they are the most predominant.

"As Long as I'm Here . . ."

PBS VP Talks About Independents, Women And Underwriting

An interview with Chloe Aaron

By GAYLE GIBBONS and REBECCA MOORE

When we interviewed Chloe Aaron this spring, we asked her to assess her first nine months as PBS's first woman vice-president. Ms. Aaron became senior vice-president for programming last July after heading the Public Media program at the National Endowment for the Arts for five years. We asked her about this as well as her views on corporate underwriting, local programming, independent video productions, and public television's future programming.

A recent survey found that oil companies and other business interests are underwriting almost 50% of PBS programming. What are the limitations that you see to programming decisions made by corporate underwriters?

Corporate underwriting generally goes for programming that is not experimental. It can go for very good programs — Great Performances, Masterpiece Theater — but it is unlikely that a corporation will take a chance on script development or new talent. What we've got to do is achieve some kind of balance between things that are important.

Texaco for example, provided the underwriting for the Metropolitan Opera's live broadcast of *La Bohème*. It was the first time in 25 years that it's been on television and it was wonderful! We need that kind of programming. But we also need something like the *VISIONS* series which is all original drama. For three years we tried to get a corporation to put just a little money in the series and none would come forward.

Do you think the government, then, is the only source of funding for innovative programs?

I do. I would hope there would be an alternative, but in watching it for the last 6

years, I've never seen a break in that precedent.

The Public Broadcasting Act of 1967 created an alternative broadcasting structure. Local station autonomy rather than a dominant centralized network was at the heart of the Act. Since then, however, the Corporation for Public Broadcasting has built a network which numbers more stations than any other broadcasting network in the United States. Do you see your function at PBS to centralize programming? What is your responsibility to the member stations?

In the first months I was here, I sent a letter to all the stations and said, "What are you planning for the next couple of years?" It turned out there was virtually no children's programming in the works. But we had 10 series offered on symphony orchestras.

I really think the role of PBS is to try and pull together the sense of what all those stations want. They are going to disagree at times, but a consensus of some kind is usually reached. Then we go forward and

show. I think what we all want are programs of such quality that people will turn away from commercial television because they can't miss what's happening on public television. To be realistic, for the first couple of years we're talking about just a few hours per week.

How are you encouraging the development of quality local programming?

Well an interesting thing has happened with the MacNeil/Lehrer Report, which I think is what should be happening more. What's happened is that since the stations are getting a half hour of programming within an hour period many of them have moved to fill up that gap with their own local news show. They have found that they're getting real ratings in the local news show because people are tuning into the MacNeil/Lehrer Report. That's the kind of partnership that I think is perfect as far as the national interconnection and what stations are doing locally.

Since two-thirds of the member stations are licensed to educational institutions, shouldn't PBS be providing models for ex-

emplary programming for them? For example a program on children's nutrition for parents.

If we're talking about very specific training programs in nutrition, it might be something that is better handled at the local level and tied into courses at a local college or university where there is a definite curriculum. I don't think we would do much of a service sending out over the national interconnection programs like that, if there were no way that people could then find out who to see in their community for follow up. It's programming that needs to be dealt with in context.

There is a half hour film, *Something's Happening*, showing excerpts from ITV programming. There was one (excerpt) I found particularly moving. It was a dramatization about a high school student who was very torn because there was a big event coming up at school. She wanted both of her parents to come and they were divorced. Well, you know you just don't want that to go out over the air. You want to make sure that it is being used in the right way, in classrooms. I think now we emphasize the *Ascent of Man*, and *The Adams Chronicles*, which are being offered for college credit. We tend to say these are educational programs because they have this outreach component and it is appropriate for national distribution.

Last season, PBS began two series, *Documentary Showcase* and *Americana*, which featured programs by independent film and video producers. Many of these groups were funded partially by the National Endowment for the Arts. What is the relationship between programs funded by NEA and those shown on PBS?

There probably should be closer coordination on that, which I admit I didn't think about until I got over here. Now I call to find out what the Endowment's doing, if it has something we can use for *Documentary Showcase*. It's a very informal grapevine kind of arrangement.

But it would be marvelous to really coordinate it, I think. If we're talking about a children's science series and a need for talent to work on that series six months from now, why aren't we back training people, instead of doing it in this scattershot way?

I've already started talking to the literature program over there about our need for scripts, for comedy for example. What are they seeing? And the grants to playwrights? Are they thinking about that? That's a very healthy collaboration.

Do you see more PBS support for independent productions?

I think we've taken one small step, but not enough, in setting aside time on Friday nights for *Documentary Showcase*. The problem is that we have no money to promote that time and no money for acquisition. We can't go after some very strong stuff that we'd like to have, for example, *Harlan County*. I'd love to get most of the stuff that Marcel Ophuls has done. I think the *Sorrow and the Pity* would be great on public television. It is scandalous that Fred Wiseman is the only independent filmmaker who ever got a subsidy to do things on a regular basis for public television and we need it.

As long as I'm here there will always be

an hour a week for *Documentary Showcase*. We don't see it as a one shot thing. We see it as something that has just got to get better. Fred Wiseman is giving us a film a year, and when that happens, it should get a lot of play. *Documentary Showcase* and the *Americana* series are two regular series where we have a chance to air documentaries. That's 1.5 hours we didn't have a year ago.

I think Friday was second only to Saturday for being the poorest audience night. What's happened now is that a lot of stations have found their ratings picking up now on public affairs night (Friday). I doubt that people are sitting there watching it all evening, but it's a way to let them know it's Friday. It's like getting used to any regular series on the commercial networks. If you can't advertise, you've got to build habits.

How important are ratings to public television? How important are they when it comes to making programming decisions?

If you talk to most people in public television you get a lot of doubletalk. They'll say ratings aren't important at all, but we want to reach wider audiences.

It's certainly not numbers, in the sense that we've got to sell products and get so much a minute for our advertising. On the other hand, we're using public funds, Congressional funds, and that \$15 someone sends in from the community. Those are all public funds and we're irresponsible unless we try to reach people.

It's a very subjective judgment. I have to say everyone was delighted when the ratings were very high for the Metropolitan Opera. Pledges were up beyond all records. That made everybody feel terrific. It's quality, and it's good opera, and people watch and they send in their money.

On the other hand, there are other shows, like *VISIONS*, which doesn't do particularly well in the ratings at all. Yet we believe in it because we know it's all this wonderful material. People are being given a chance. Sometimes they're jewels. And as a concept, as a unit, we will fight for it to survive, but not on the basis of the numbers. Because the numbers just aren't there.

I guess we do want it both ways. We want to say we're reaching wider audiences, but there are some things that we will fight for even if only a million people watch, because it was important that there were a million people who had a chance to see it.

Ratings are in fact a programming consideration at PBS. What is their effect on the decision to continue target audience programming?

We haven't stopped target audience programming. But I think everybody agrees, including the target audiences, that it is less than perfect. We have *Woman Alive*, *Black Journal*, *Black Perspective On the News*, *Realidades*. These programs tend to be thought of by the bureaucratic mentalities as taking care of the problem.

I don't think any of us agree that that takes care of the problem. What we really want is women and minorities to come into the mainstream of the creative process. I've seen one really outstanding example of how that can work, the *VISIONS* drama series. I don't think it's any accident that it's headed by a woman.



Chloe Aaron in her PBS, Washington, D.C. office.

PHOTO BY LEONARD RIZZI

'When people accuse us of trying to be another network, it is absurd . . .'

The Future of TV: A Slave of the Marketplace

How the technologists see it

By NICK DeMARTINO

When confronted with the array of dazzling technical possibilities that the future of telecommunications may hold, it is hard to avoid becoming a technological determinist.

So for the several hundred people who assembled March 4-6 at the Annenberg School of Communications in Los Angeles to ponder "The Future of Television", the lure of fantastic new media toys was the strongest and clearest message.

For Gene Youngblood, the teacher, author and media theorist who created this conference for an LA educational consortium called the Film and Television Study Center, the agenda didn't turn out exactly as he had planned.

The conference was organized around two formats — a series of formal panels, comprised mostly of technologists discussing six different fields (see below) and more informal roundtable discussions among 18 artists, scientists, social scientists, writers and theorists, most of whom were friends and mentors of Youngblood's during the course of seven years of research for his new book, *The Videosphere*.

Youngblood called the conference "prescriptive," in hopes that the 18 members of this so-called "interdisciplinary council" could answer his question, which underlined the entire three days: "If you had the power and the means to make TV the way you would like, what would you want to happen?"

The notion was to get at what TV and related media *should* be like, rather than what it *will* be like.

This never really came off. The various sessions of the 18 interdisciplinarians were lively, but rambling, encounter-type discussions ranging from an occasionally cogent prescription to lots of complaining about the way TV works now.

Because they had prepared formal papers, the technologists on the panels had a very clear message about the future of TV: the determining factor is the development of technical processes within the economic constraints of the marketplace. Predictably, they seldom questioned the context of the new media, except to express the constraints that economic factors like cost, mass production, and regulation might have on undiluted technical advancement.

Two panels on art and on legal/political issues were exceptions to this kind of utopian futurism by the technologists, as were numerous challenges from the audience, which included local media artists and activists.

The Film and TV Study Center (6233 Hollywood Blvd., Suite 203, Hollywood, CA 90028) intends to publish these proceedings. And *TELEVISIONS* will feature in an upcoming issue a major piece by Youngblood that outlines his fully developed theories on our cybernetic future prior to the publication of *The Videosphere*.

What follows is a summary of technical advances discussed at the conference. (Engineers meeting at the 10th Montreux conference in Switzerland in June corroborated many of the conclusions.)

This tech-talk isn't designed to make our readers into technological determinists, but to provide a glimpse into the kind of thinking which occurs in the advanced research-and-development sector of international capital. Future issues of *TELEVISIONS* will continue the dialogue about how media technology can be either a force for change or for the status quo.



The "Interdisciplinary Council." L. to R.: the author, Alan Kay of Xerox, editor-videoartist Ira Schneider.

Videodiscs and cassettes: It will take a decade of marketplace battle between the videodisc, which may be introduced finally by year's end, and the half-inch videocassette, now becoming universally standardized to the new Sony 2-hour Beta format. But the prize will be valuable, even for the losers: entry by a video storage-and-retrieval device to the vast market of home buyers, not only for hardware, but most importantly the software to play over it.

Three execs from the MCA Discovision took different tacks in selling their new disc machine, which was demonstrated to a dazzled crowd. Most interesting was Kent Broadbent, VP for R&D, who is responsible for the technical development of MCA-Phillips optical disc system. The MCA disc is an LP-sized record, offering a half-hour per side of full 4.5 MHz bandwidth, providing an NTSC color TV signal with dual audio channels. One TV frame per turn, 30 turns per second at 1800 RPM, 54,000 turns total. Each TV frame equals a billion data bits or 54 billion databits. Cost 60¢ per disc at the factory. Because the data is recorded and read by laser, nothing touches the clear plastic-coated surface. Thus, handling and playing do not degrade the record. Other features are freeze frame, slo-mo, reverse motion, frame crawl, and automatic search for any of the 54,000 frames, making it as useful for information storage and retrieval in industry and business as for TV storage and playback.

The industrial model, first edition of which was sold to the CIA, has most fea-

tures. The home unit will be marketed selectively by December. A competitive disc system by RCA is being held until the market is tested, and it was barely discussed at the session.

MCA's marketing will concentrate on MCA-owned Universal movies, which will be cheap — the five-disc set of "Jaws" will cost \$10, almost all of which is profit for MCA.

There was much talk about the educational potential of the disc, especially its storage and retrieval capacity. But the marketplace overtones were clear: "It may be strange to say that the way to get a home instruction course is differential equations on the videodisc is to urge your friends to buy 'Jaws,'" said one exec, "But, then, Gutenberg thought that the purpose of moveable type was to put a Bible in every home. Somehow we found uses other than those originally intended. So, too, will it be with videodisc. Meanwhile, buy 'Jaws.'"

Cable communications networks: After an upbeat picture of the current cable and pay-TV industry by NCTA chair Burt Harris, the panel outlined new technical developments that will pave the way to a wired nation, that notion which had been discredited since the "Blue Sky" days when cable was supposed to have done everything but change the baby.

USC professor Herb Dordick, who has helped plan cable systems in LA and NYC, predicted that all of television in 2000 will be on some kind of wire, primarily because

it is so wasteful to use airwaves to transmit images to fixed points. This will begin to occur by 1985 when some 30% of the country will be subscribing to cable — the point historically when a medium becomes attractive to advertisers. Major entertainment will quickly move to pay TV, advertisers will shift major budgets to cable, which is like audiovisual direct-mail, and the production of new programs will be done for cable networks. Existing TV networks (including PBS) will become program producers, like the movie studios are now. Economics will become favorable to small-package audiences.

Walter Baer of RAND identified three technologies that will assist in this process: Satellite networking for cable is already happening, and will accelerate. Fiber optics, which will initially be used by cable companies to carry "trunk" loads and transmit (studio to head-end, etc.) may be the source of the greatest competition, since AT&T could offer cable-like services if it replaced its current system with the glass-and-laser lines that offer such an expanded channel capacity in a fraction of the space required for current coaxial technologies.

Cable's future will continue to be the battleground between all the powerful corporate giants in the media world, a factor which may overshadow any technical considerations.

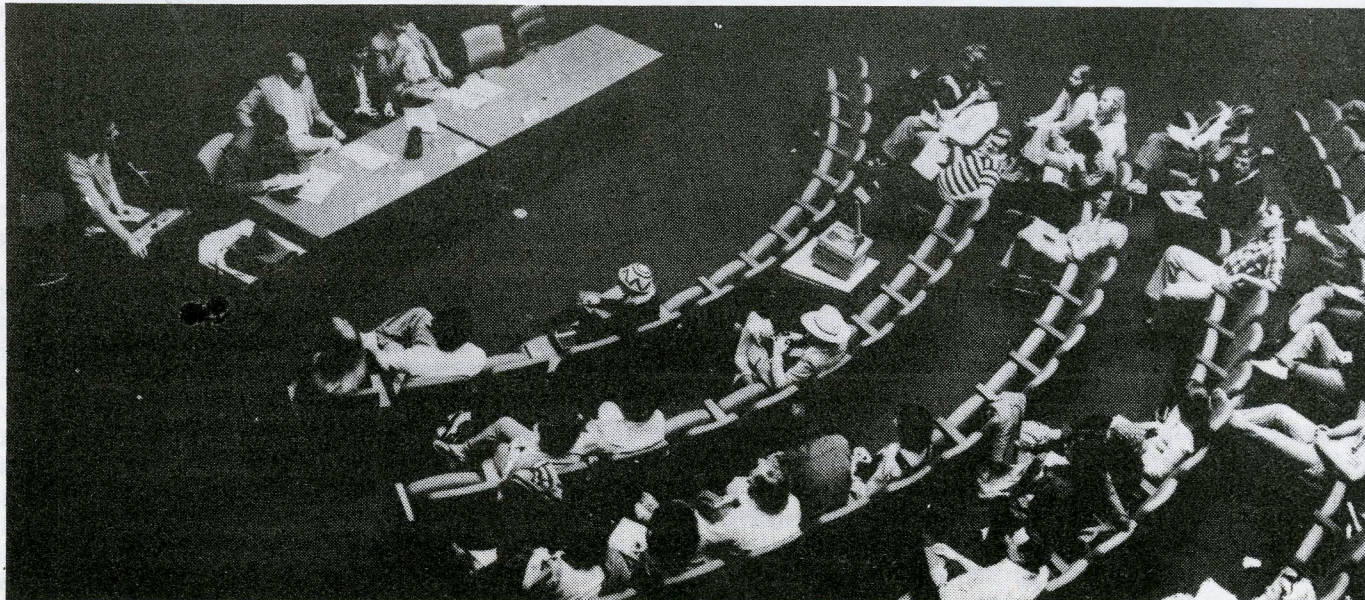
Home Computers and the Information

Utility: Underlying all the technology described in the six workshops are the extraordinary advances in the computer field, particularly microprocessors. The case study of hand calculators, which offered to consumers in two years an amazing range of computing power for a plummeting price, was cited as the example of how mass production and consumer marketing can affect the introduction of technology and its widespread use.

David Farber, a professor of information and computer science at UC Irvine, explained that since the computer's introduction there has been an increase by seven orders of magnitude in the logic capability per square inch, and that in the next five years the same rate of change will occur. The absolute cost of computing power continues to drop, so that one can now buy the equivalent of the IBM 360 for under \$1000.

Despite these developments, most people really don't need this kind of computing power. They want information, which is a problem of storage, not computing. The technologies which will make massive access to stored information as cheap as the micro-processors have made computing power is the bubble memory, which will be the first non-mechanical technique. Users will be able to plug a bubble-like electronic storage unit into pocket calculators for data storage and retrieval.

Nonetheless, computers are finding their way into homes at a rapid pace, mostly through the integration of microprocessors as control units in home appliances. The tiny chips, which are computers, replace



A panel on hardware before the audience at the new Annenberg School of Communications building in Los Angeles.

PHOTOS BY TOM WILSON

mechanical logic systems in TVs, microwave ovens, and other complex home appliances.

The home computer game field is also growing rapidly, with some 150 consumer-oriented stores and 35,000 hobbyist subscribers to computer magazines. "What the field needs to do is to go from the ham radio stage to the CB stage," said Farber, which means dividing machines that do things people want done: interacting with others, with data bases, and electronic-mail type systems. He described several professional and industrial computer-based systems in operation today which point the way to such activities in the home consumer realm. Ultimately, such services may be more the result of battles between IBM and AT&T than what people want, he warned.

Alan Kay, head of the Xerox Learning Research Group, is conducting a 10-year project on personal computing and has invented several new tools for the purpose of exploring the process of learning by utilizing computers. "The new digital media," says Kay, "can contain all other media. They function as the instrument which the musician uses." But, the tool will depend upon how society defines it.

Domestic Satellites: Of the three categories of telecommunications satellites now in use (international, domestic, and experimental), the greatest expansion in the next decade will be in the use of satellites to create national networks. While U.S. development will continue, the satellite offers benefits of a greater magnitude to underdeveloped nations, which may not possess massive ground-based phone TV and data networks like the U.S. (As an example, it took 20 years for the U.S. to construct a national TV network on the ground. It took two years to install a full-color, 40 station network in Indonesia at a fraction of the cost, using satellites).

Since satellites are used primarily for replacing or updating other, outmoded forms of interconnection hardware, noted C. Richard Jones of Hughes, "it is just a matter of economics — how much does it cost to provide the service?" His presentation was notable in explaining how costs are plummeting for each of the three major cost components — the launch vehicle, the satellite itself, and ground terminals.

which received the fullest plug by various satellite industry types. The shuttle will be able to launch a 2400-pound satellite, which is much larger than any previous satellite, for \$5.3 million dollars (1975 value), representing substantial savings. In addition, the shuttle will be reusable, unlike the "disposable" technology of space rockets.

The satellites themselves are also increasing in power as costs go down. Jones pushed his company, Hughes', Syncom IV, a satellite which offers prime power four times that of Westar, three times that of ATS-6, twice that of the CTS, the latter two being the largest capacity satellites ever launched. Syncom IV-generation satellites could carry twice the amount of communications equipment at a fifth to a 12th the cost for launching, since the weight is down.

The advantage of reducing costs by magnitudes of two to four and being able to increase performance by two to four times means that the satellites can become much more powerful. This, in turn, means that the size of ground stations can be reduced — thus lowering the costs for building networks or gaining access to the satellite. In the ATS-6 and CTS experiments receive-only dishes were built at costs below \$6000 because of the high-power nature of the satellites (compared to \$250,000 for typical multi-use Intelsat ground station).

In addition to the size/cost reduction possible in ground stations that will be forthcoming by the larger-power satellites, the hardware is becoming cheaper because of mass production. Today's typical receive-only dish that can carry 10-12 channels to a cable TV system costs between \$30,000 and \$70,000.

In other countries than the U.S. the concept of direct satellite-to-home broadcasting will be likely to develop a mass-production of small, rooftop dishes in the \$300-500 range, a development which will also affect the overall costs of the technology.

John Witherspoon of the Public Service Satellite Consortium offered a few of the effects of these satellite developments: a burst of new satellite networks for a much wider range of services, characterized by smaller and cheaper earth stations and

ice. Wider personal services will be developed, with an emphasis on equality of access regardless of locality.

Portable video recording: Scanning the history of videotape recording, slightly more than 20 years, the rapid advancement of features and the decline of cost was also noted by consultant Joseph Roizen. The three kinds of recording techniques — longitudinal, transverse (quadruplex is the principle example), and helical — have been developed thus far in the "analog" video mode. Today we have reached the point where the new generation of 1" nonsegmented helical scan video recorders will replace all 2" quad machines in the next decade.

Another helical advance has been the videocassette, which was detailed by Sony's David McDonald, who asserted that U.S. broadcaster's enthusiasm for the ¾" U-matic cassette for ENG was an "accident." The U-matic was the highest state-of-the-art for the industrial-educational field, which had been far more dynamic technologically since 1960.

The takeover of ¾" in broadcast has lowered entry cost and access to quality TV, has merged the educational/industrial producer technically with the professional broadcaster, and will all but eliminate film in most U.S. TV in the next decade.

The two advances which will move videotape recording to a new level are charge-coupled devices (CCD) and digital video. CCDs are solid-state electronics that could replace the tubes, bulkiest, most expensive and sensitive portion of the TV cameras.

Today's state-of-the-art cameras are under 10 pounds (Thompson, Hitachi, Ikegami) for \$25,000-70,000 that can shoot color in very low light. With the introduction of CCDs, and microprocessors, a lightweight camera-desk unit could be developed. The eventual goal would be to get an acceptable level of color quality in such a unit below \$1000 for the home consumer market.

Digital video is an advance that would shatter current cost relationships in TV production and distribution. The difference between digital and analog recording is that digital stores information in the form of binary code, like computers — on, off, on, off. Thus, once the information is record-

video effects and switchers, noise reducers, etc. But the technical barriers to utilizing the digital technique for recording the actual signal are still considerable.

Home display systems: While other elements of the television technical plant have gone through numerous generations of advances, the primary method of display — the picture tube or cathode-ray tube (CRT), almost defies replacement, asserts Xerox's Ben Kazan. Today, however, a mounting crescendo of effort in the U.S. and Japan has been made to replace the CRT with a large flat screen display device.

Among the elements encouraging this development: A desire to achieve greater realism by means of a larger screen size. Since CRTs at present must be roughly the same depth as width, they cannot be produced anywhere near the 40"-plus size that is needed. The market for the large screen, nonetheless, is very economically attractive. In addition, a wide array of new light-emitting and controlling materials and the ubiquitous microprocessor and semiconductor has encouraged experimentation. Military interest in portable, low-power display units has led to considerable U.S. government R&D support.

Three research efforts are currently underway: (1) to drastically redesign the CRT itself. (2) to use a luminescent layer that emits light outside a vacuum. (3) to utilize rays from gas discharge elements. A breakthrough is probably three years away.

Today the technology for large-screen TV images is being accomplished by various forms of projection — using an image generated by the cathode ray tube and shooting it to a screen some distance away by various techniques.

Projection TV is here today, and is taking off as a consumer item. The main point Alex Jacobsen of Hughes made is that "brightness comes at a price." It costs about \$50 per lumen to obtain adequate brightness — for the required 200 lumens the cost is \$10,000, far too much for the average consumer. The problem is to break the brightness-price tradeoff.

Three methods are used: (1) a magnifying lens placed in front of a CRT (Example: the Sony 4000, at about \$2500). This is technically easiest and the quality, brightness and sharpness is relatively poor. (2) By dividing the color signal into three black-and-white signals, magnifying them and sending the signal through color filters on a light-sensitive screen, a brighter, better performance image is possible. This technique (example: Advent Videobeam, costing up to \$4000) is technically more complex, more expensive, and bulkier. (3) The "light-value" approach replaces phosphor in the conventional cathode ray tube with an electrooptic medium. The light is then generated by a separate light source through a valve, rather than from the conventional CRT. Performance is exceptional, because brightness can be increased by upping the power of the light-source. But this method requires three CRTs and three light sources, putting the costs in the outrageous category. (Example: GE's PJ5000 at \$50,000 and the Eidophor at \$150,000-plus).

The ultimate development in this field would be the replacement of the CRT by solid state light valve technology, which would be as small as a postage stamp. Results in this research is at least 10 years away.

Joe Roizen's presentation about new home services over broadcast centered on the potential that digitalizing video would bring — a revolution as potentially powerful as that wrought by the microprocessor chip. One example, already in operation in Britain and several other European countries is a "Magazine of the air" — a digital code carried in the vertical interval of broadcast signal that carries printed data like weather forecasts, recipes, horoscopes, stock prices, theatre info, etc. The cost for the home decoder is about \$115 per set.



A rule of thumb has been that the launching costs represent half the total system cost. Thus, early generations of satellites were keyed to the cost of launch rockets — the Delta (\$13.5 million), Atlas Centaur (\$24.5), and Titan (\$58.3).

As the rockets got larger, larger satellites with greater power could be launched, but at a greater cost. The breakthrough in launching costs will come, however, with the full deployment of the space shuttle,

much larger number of locations in a given network.

As costs go down, the journalistic function of television will become more flexible: a wide use of the satellite coupled with ENG-type equipment will make live transcontinental programming as common as the portapak. Direct satellite broadcasting could be a major battle in the U.S., which is based on local TV stations. Rural TV viewers will begin to receive more equal serv-

ed, there is no chance for error. Analog recording is continuous flow with shadings, rather than the on-off sampling technique of digital. Thus, when digital is perfected for recording and broadcast, it will take up dramatically less bandwidth and can be reproduced endlessly with virtually no signal degradation, noise, etc.

At present digital techniques are used in equipment that processes and improves the signal — time base error correctors,

HISTORY

Farnsworth: TV's Inventor: RCA Battles, Sarnoff, The Philco Years, and the Philadelphia Demonstration

Second in a four part chronicle

By PAUL SCHATZKIN

In the Fall of 1927, Philo T. Farnsworth and his friends became the first to gaze into the shimmering eye of electronic television. Who could have guessed that the rest of the world would not share the experience for another twenty years?

For Farnsworth himself, the moment of triumph quickly passed as he considered the magnitude of the job that now lay before him. The crude, flickering image proved that the idea that struck him when he was 13 would work; it also proved that a great deal more would be required to take this fragile invention from the laboratory to the living room.

There were occasional callers at 202 Green Street during this period; some of the backers took a keen interest in the venture and dropped by from time to time to see what, if anything, had become of this curiosity they'd launched. Invariably, the equipment was disassembled, strewn across the table top and "temporarily inoperative." the backers had only George Everson's eyewitness accounts to assure them that Farnsworth had produced encouraging results.

Work continued for another year, funded for the most part out-of-pocket by the Crocker group. The group grew steadily, as new investors were enlisted to raise additional capital in order to meet the escalating monthly expenses. The financing arrangements called on all the original partners to contribute proportionately in accordance with the size of their holdings. Most of the backers were experienced investors with enough cash on hand to meet their obligation without diluting their equity, but Farnsworth was both the largest single stockholder and the least able to draw on personal cash resources. Consequently, most of the stock that was sold to new investors was Farnsworth's.

Along with the roster of investors, the work force at 202 Green Street grew steadily as well. All of the men Phil hired got caught in the spirit of their work, and shared a special camaraderie. In the next year, Phil and Cliff Gardner and the "lab gang", as they called themselves, rebuilt the video system dozens of times in a tedious, time-consuming process designed to bring the rudimentary system up to some acceptable visual standard. Farnsworth concentrated his attention on increasing the number of scan lines, and set his sights on a minimum 400 lines per frame. For comparison, the mechanically scanned television devices everyone else was experimenting with at the time were capable of 50 lines per frame at best.

Farnsworth continued using geometric shapes like crosses and triangles for his experimental transmissions. One night while looking at the receiver, Phil unexpectedly saw a moving image — smoke. The moment he realized what he was seeing, he thought something was burning. In the next instant, Cliff's hand waved in front of the camera — holding a cigarette. Phil sighed gratefully and looked a little closer at the swirling patterns. He could see clearly the delicate spirals of vapor; the whole effect was conveyed quite nicely. When George saw it, he declared it was a sign of real progress.

In the Spring of 1928, Roy Bishop pulled George into his office and handed him

some figures that showed that more than twice the original limit — nearly \$60,000 — had been spent to meet lab expenses. Confronted with these figures, George agreed with Bishop that it was time for Farnsworth to show his invention to the people who were paying for it.

Phil was just as surprised as George at Bishop's figures. Still, he was hesitant to make a formal presentation of his work; the

ment as an apparition of a dollar sign (\$) materialized out of the darkness.

Roy Bishop was the first to speak after the demonstration, which included a variety of geometric shapes and the kinetic patterns of cigarette smoke. Bishop warmly congratulated Phil for delivering "his end of the bargain" and then set a more sober tone for the years to come: "It will take a pile of money as high as Telegraph Hill to successfully conclude this work," Bishop declared. Phil listened on, anxiously as Bishop added, "I think we should take immediate steps to sell this to one of the large electrical companies that would afford to provide more adequate capital and facilities."

Bishop's proposal came as no surprise to Phil. He fully expected all along that once he had proven that his invention would work, his backers would try to sell it quickly, hoping for a handsome cash return on their investment. Similar scenarios were common to the stories of many other inventors, and Phil was determined not to share

license his patents. Thus, the patents would earn from royalties many times more than what they could get if they tried to cash out now.

Phil couldn't argue Bishop's premise — the real work of refinement and engineering was just beginning and the work would be costly. But this was not a tangle of tubes and wires laying on a workbench — this was true television, the ultimate fulfillment of decades of science fiction fantasies about "pictures that could fly through the air."

Perhaps Farnsworth's youth enabled him to see farther into the future than his colleagues, who were many years his senior. Phil believed that the long range return from his invention would dwarf the initial outlay of capital. It seemed like only a matter of perseverance before the world beat a path to their door.

With some verbal assistance from George, the matter of selling the venture was tabled — temporarily — and the Crocker group agreed to continue finding money to support Phil's work.

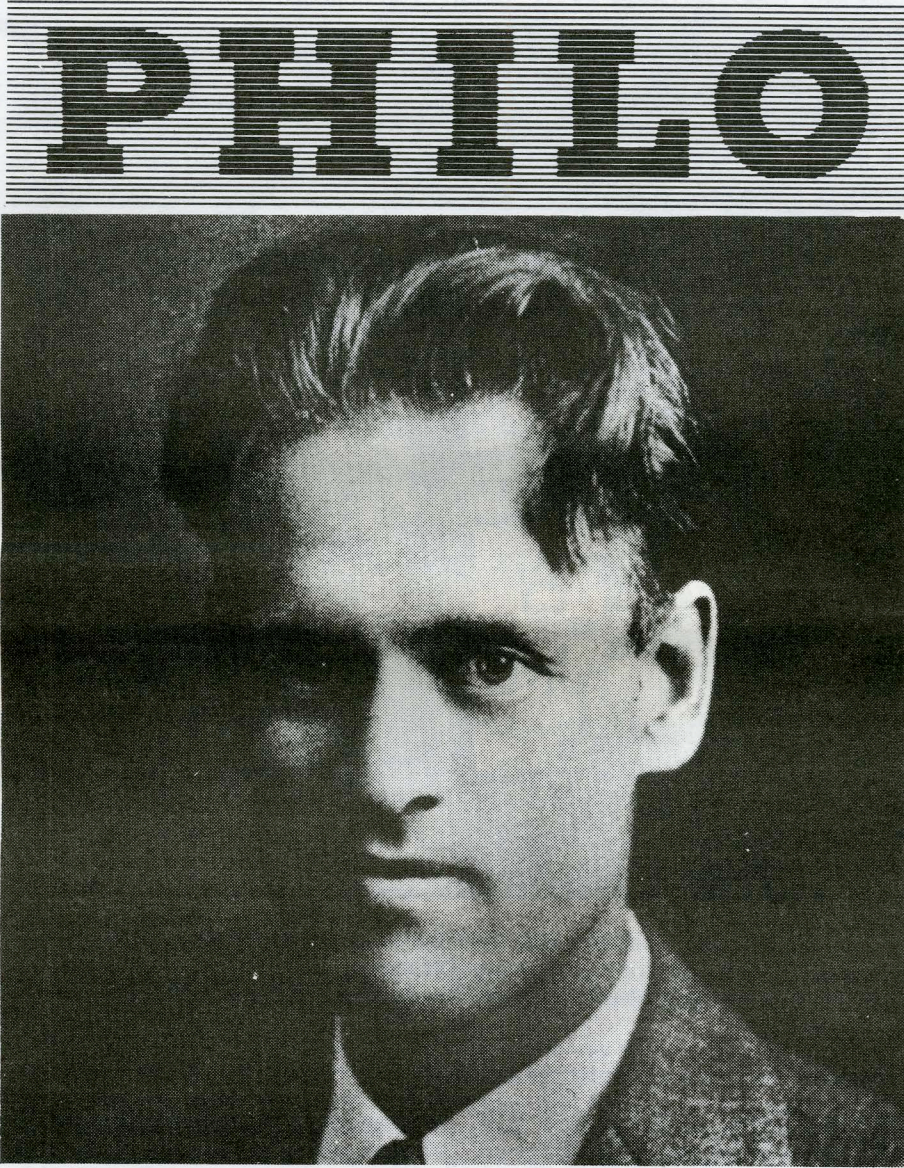
But there was little time for comfort. Farnsworth realized now that there was a genuine disparity in the level of his own commitment and the level of commitment he could expect in the future from his present backers.

After Bishop and Fagan and their friends left the lab that night Phil and Cliff Gardner sat down together for a moment to think about what had happened. As they talked, Phil contemplated the implications of what Roy Bishop had proposed; the prospect of selling out left him numb and cold. Phil felt that he was the only one who could perfect his invention. He didn't want to do it while he was working for someone else. He wanted to work for himself, be his own boss, set his own pace and exercise the freedom in the years ahead to follow his own imagination.

Thus, the aftermath of the first demonstration for his backers signaled a new phase in Philo Farnsworth's career: A boy's dream to make an idea work became the classic struggle of a young inventor trying to continue his pioneering work and maintain his independence.

The readership of the San Francisco Chronicle added a new word to their vocabularies when they read the feature headline in the morning edition on Sept. 3, 1928, "SF MAN'S INVENTION TO REVOLUTIONIZE TELEVISION."

The accompanying text described Phil's invention as a "queer looking little image in a bluish light which smudges and blurs frequently, but the basic principle is achieved and perfection is now a matter of engineering." The Image Dissector was described as being the size of "an ordinary quart jar that a housewife uses to preserve fruit." The article was accompanied by a front page photo of the newly-mustachioed Philo T. Farnsworth, posing as he would a hundred times with his magic jars in hand.



system was still very fragile, its reliability was tenuous at best. Besides, he felt that he was on the verge of producing a really fine picture, one that would be clearer and much more stable. He pleaded with George for just a few more weeks, but George reminded Phil of the serious tone in Bishop's voice, and a date was set for a demonstration.

The Crocker group re-assembled at 202 Green Street in May of 1928, together for the first time since that unlikely day 16 months earlier when they first met a 19-year-old boy who told them that he could invent television, whatever the hell that was. They really understood very little of what Philo Farnsworth told them that day, but for some unexplainable reason it smelled like a winner, so they went for it. Now, 16 months later, as they were ushered into the quiet darkened lab, they had no idea what to expect. None of them had ever seen television before.

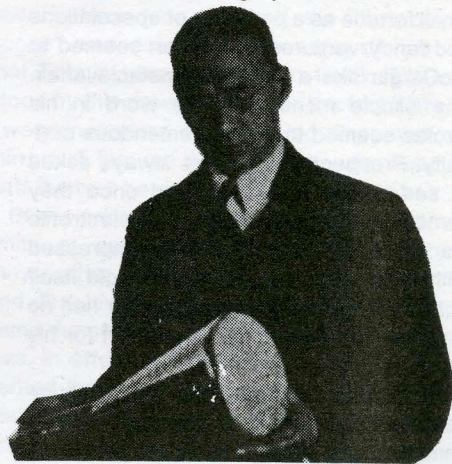
"This is something a banker will understand," Phil said to George as he switched on the system. When the little round screen hummed and flickered to life, Fagan and his friends gazed in hushed bewilder-

ment of reckoning by postponing the demonstration as long as possible. Still, nothing quite prepared him for the lack of foresight he detected in Roy Bishop's remarks, and for a moment he was speechless.

When he did speak, Farnsworth's carefully chosen words concealed his true anxiety; instead, he outlined what had been brimming through his own mind, his own scenario for the future.

As Farnsworth figured it, he and his men were in the enviable position of having broken ground in fertile new territory. If they stuck together and followed through on their initial success, many more patentable improvements would follow. It was obvious from the immediate results that there were many problems to be solved. By continuing at their present pace, the clever men of Farnsworth's Lab Gang would find the problems first, solve them first, and file patents on those solutions. As they worked out the bugs, they would build a broad patent portfolio, gradually wrapping a hamlock of patents around the new art.

In the end, Phil reasoned, everybody who wanted to get into the television business would have to come to Farnsworth to



Vladimir Zworykin

Survivors of Philo T. Farnsworth, friends and remaining members of the "lab gang" will celebrate the 50th anniversary of the invention of television on Sept. 7, 1977, at the Foothill Electronic Museum, 12345 El Monte Rd., Los Altos Hills, Calif. 94022.

The sudden flurry of publicity surprised no one, least of all the backers, some of whom had begun courting the press in anticipation of a refinancing deal. Unknown to Phil at the time, George Everson and Jess McCargar were quietly negotiating to cash out the rest of the Crocker Group, including Crocker, Fagan and Bishop.

Not long after the Chronicle article appeared, fire swept through the second floor of 202 Green Street, charring all of Farnsworth's equipment. The disaster underlined the hazards involved in Phil's research; some of the chemicals they used, like potassium were highly volatile; vacuum tubes were still very fragile, and occasionally implode without warning; and there was always the lingering possibility that someone would touch the wrong terminal and get a blast from the strong currents and high voltages that were always present.

Phil and the "lab gang" rebuilt quickly after the fire, hardly losing a stride in their frantic pace to make their invention commercially viable.

Natural disasters could not stop Farnsworth, but the uncertainty of human nature could. In 1929, the activity backstage began to come to a head. Phil knew that changes were imminent when his funds were unceremoniously shut off. Under these conditions, he was faced with the unpleasant task of dismissing some of his men. Farnsworth rose to the task reluctantly, for he was being asked to lay off the only people in the world who really understood what he was doing and the way he was doing it. He had trained most of these men personally, and felt that, as an investment, they were worth much more than the wage that they were paid. These men were an invaluable resource, the driving force that could make all the magic happen. Phil assured everybody that he would rehire them just as soon as the financing was straightened out.

When the smoke finally cleared at Crocker Bank, Jess McCargar was no longer employed there, for reasons that have never been explained. Nevertheless, either in spite of losing his job — or because of it — McCargar and George Everson succeeded in buying out the remainder of the Crocker Group. Leaving Bishop, Fagan and the other behind, George and Jess reincorporated the venture as Television Laboratories Inc. and Jess was declared president and chief executive. George was named treasurer and Farnsworth, who continued to own a substantial share of the enterprise, was named the Director of Research.

After squaring with the Crocker Group, Jess McCargar proposed to raise new funds for research by floating a stock issue. The task suited McCargar perfectly. This was the age of "beautiful nonsense" in the financial world and Jess McCargar was a creature of the times. He was a stock peddler by trade, and had amassed a small fortune as a promoter of speculations and fancy ventures. Television seemed to McCargar like a highly promotable affair. The simple mention of the word in his circles seemed to evoke tremendous curiosity. Prospective investors always asked to see it for themselves, and once they came face to face with the electronic marvel, they were invariably impressed with what they saw. Television sold itself right from the beginning. McCargar had no trouble finding an adequate market for his stock.

Farnsworth accepted the new circumstances with cautious enthusiasm. He was immeasurably grateful for the opportunity to resume his work, and he was certain that the threat of a sell out had been averted, at least for the time being. Still, the situation seemed far from perfect. There was a lingering aroma around all these financial shenanigans. But Phil concealed his ill-ease from his friends and colleagues by assuring them with hollow confidence that "everything would work out all right."

Back East, the news of a breakthrough on the West Coast spread quickly among the giants of the electronics industry. However, the important details of Farnsworth's work remained a closely guarded secret while the patents were still pending. Most of the old professors were content to wait for further developments while they continued to experiment with their spinning wheels. But one interested party wasn't taking any chances: David Sarnoff, the recently appointed vice-president and General Manager of the vast Radio Corporation of America, wanted to know exactly what was happening at 202 Green Street.

Sarnoff was a fiery Russian emigre who got his first taste of the power of global communications the night he reported the sinking of the Titanic to the world from his post on the wireless for American Marconi. His star rose quickly when Marconi was absorbed by the government spawned Radio Corporation after World War I.

Sarnoff built his career on a reputation for predicting the future of the electronics business. He was instrumental in shaping

slightly as consumers held onto their money in anticipation of something better. What Sarnoff saw was enough to convince him that visual broadcasting would one day dwarf its sound-only predecessor.

Consequently, in order to head off the threat that a new industry would obsolesce his own, Sarnoff proposed to sire the new industry himself. He began in 1930 by acquiring the services on one Vladimir K. Zworykin, a research engineer who had some experience in television. Zworykin — like Sarnoff, a Russian emigre — was introduced to the concept of television by a Russian scientist named Boris Rosing, who proposed a partially electronic television system in 1906. Zworykin fled Russian in the early 1920's and came to America where he found work with Westinghouse as a researcher. While working for Westinghouse in 1923, Zworykin applied for a patent for a complete electronic television system, but the patents were never granted and Westinghouse failed to see much promise in the work so it was dropped. In 1930 Sarnoff learned of Zworykin's exper-

forces through a long string of successful litigation that put dozens of small companies out of business for failure to pay patent royalties to RCA.

Knowing that Sarnoff was bound to this policy, it is easier to understand that he might not want this new competitor to know that RCA was entering the arena on an all-or-nothing basis.

As it is difficult to accurately interpret Sarnoff's motivations, it is equally difficult to assess whether Zworykin would have received a similar reception were he flying his true colors. Farnsworth tended to accept anyone who was articulate in the subject as a fellow traveler on the video frontier. Zworykin took full advantage of Farnsworth's hospitality.

A formal examination of new patents and the work that they cover is common practice in negotiating for a patent license. But Zworykin "prowled around" Farnsworth's lab for three full days, during which time he had ample opportunity to expose himself to most of the secrets that made 202 Green Street the only address in the world with true television.

Zworykin's response to Phil's work was for the most part cautiously complimentary. He was familiar with Phil's cathode ray tube receiver: Zworykin himself produced some noticeable results with a similar receiver in 1929, two years after Farnsworth — but the absence of a suitable electronic camera device confined him to the use of spinning wheels on the input end during the early Thirties. His work on the picture tube was retarded by all the limitations inherent in the spinning disc approach: The system could not produce any more than 40 or 50 lines per frame because the receiver could produce no more detail than was sent by the transmitter.

Reassembling an image on a photo cathode in an evacuated bottle — converting electricity back into light — was the easy side of the equation. Converting values of light into values of electricity was the missing ingredient that eluded Zworykin and his contemporaries for so long. The stroke of true genius was required to solve that one. Now Philo T. Farnsworth — twenty years Zworykin's junior — showed him what he'd been missing.

Zworykin dropped his tone of guarded praise for a moment when Farnsworth finished explaining the Image Dissector. His response revealed genuine admiration, which is not often shared between competing inventors: "I wish I'd invented that," he sighed concedingly.

Nevertheless, at the end of his visit, Zworykin's mood changed: Though he had been clearly impressed with Farnsworth's invention, he was now reluctant to discuss the matter of a license any further. The entire matter was left up in the air.

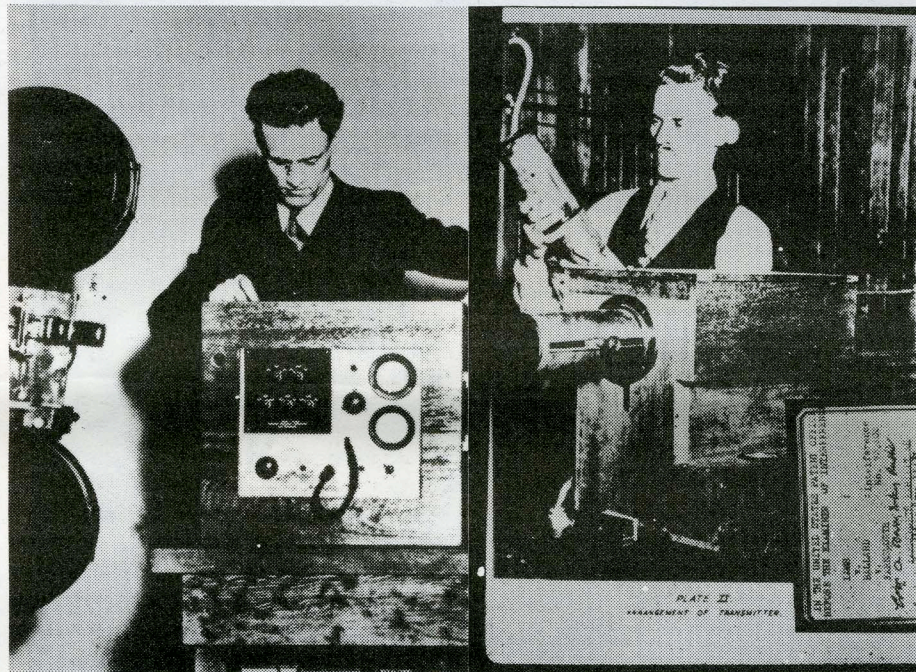
There was a curious tone in Zworykin's sudden reversal that rattled everyone in the lab. He seemed so impressed one minute, so disinterested the next. Later that night, Phil wondered aloud to Pem if perhaps he had shown Zworykin too much.

The matter was set aside when the Bell Labs announced that they had discovered a new form of cesium with a higher photo electric output than the formula that Farnsworth was using. Farnsworth was worried about the low output of his photoelectric surfaces, and the new cesium sounded like something that would noticeably improve the performance of the Image Dissector. Phil went East to see if the new substance would be useful.

While Phil was out of town, George Everson received an unexpected request for a visit to the Farnsworth labs: David Sarnoff wanted to see Farnsworth's invention for himself.

It is unclear why a man with Sarnoff's preoccupations would seek out an obscure address clear across the country; perhaps he felt that if there was anything important on Farnsworth's bench, then his own presence would be sufficient to execute an incisive deal on his own terms. It seems more likely that he could no longer

PHILO



Left: The first film chain was invented when the lab gang rejuvenated an old projector and rigged it up in front of the Image Dissector.

Right: The San Francisco Chronicle ran this photo of Farnsworth and his invention in September 1928.

radio broadcasting along the lines of a memo that he wrote long before the word "broadcasting" became common usage. In the 1920's, he managed his company's patent portfolio to the point that it was virtually impossible to manufacture or sell radio equipment without paying royalties to RCA.

In the late 1920's, Sarnoff realized that most of the fundamental patents covering radio would soon reach the end of their 17 year terms and expire. He also reasoned that some new kind of radio device would be invented that would eventually make the existing patents obsolete. Sarnoff concluded that if RCA could get a handle on that new kind of radio before anyone else, then he could manage the introduction of the new invention in such a way as to maximize RCA's return on the old radio patents before they expired. In other words, if he controlled the new development as well as he controlled the old ones, then he could stall the new developments long enough to milk the radio patents for every day of their 17 year term.

It comes as no surprise then that the new development which looked the most exciting to Sarnoff was not radio at all, but radio-with-a-picture. Sarnoff observed that everytime there was a flurry of publicity about television, radio sets sales softened

ience and arranged for Zworykin to resume his work with RCA's blessing at their well-equipped research facility in Camden, N.J.

Zworykin was packing his bags, preparing to move from Pittsburg to Camden in the early Spring of 1930 when Sarnoff suggested he visit San Francisco first, to see if this upstart young inventor had invented anything that RCA would need to advance their own research.

Sarnoff included one notable detail in his instructions: Zworykin was to approach Farnsworth on his own, in his present capacity, as an engineer for Westinghouse investigating the possibility of a patent license. Zworykin's next destination after San Francisco — Camden — was not to be discussed.

Why Sarnoff wanted to know *what* he was dealing with before Farnsworth learned *who* he was dealing with is not completely clear; the answer no doubt lies in a policy which served as the cornerstone of RCA's patent portfolio, a tradition which Sarnoff intended to maintain with television: This unwritten but unviolated touch of management bravado required that whatever patents RCA needed, RCA owned. This policy served successfully throughout the Twenties as RCA acquired control of the patents of Marconi, Armstrong, DeForest and others and guided RCA's legal

suppress his own intense curiosity, that he went to San Francisco to see something that he could not see anywhere else in the world.

Once inside the lab, Sarnoff looked all around to get his bearings, but as the system hummed to life, his gaze settled on the face of the receiver. Sarnoff studied the image with the chilling silence of a man who had confronted his own chosen future. It was startling enough that he was seeing true television for the first time; what concerned Sarnoff more was that he had expected to see it first under his own roof.

When he had seen all that he needed to see, Sarnoff drew Everson aside and quietly offered to buy the entire enterprise for an unthinkable figure, something on the order of \$100,000. Sarnoff insisted however that the deal include the services of Mr. Philo Farnsworth. George assured Sarnoff that such a deal was not possible.

"Well, then," Sarnoff said, confidently dismissing the entire matter, "there's nothing here we'll need." With that, Sarnoff quickly departed, before George could ask him why he'd offered \$100,000 if he didn't really need it.

The Farnsworth company found an established ally on more favorable terms in the Spring of 1931 when the Philco Radio Corporation became their first licensee. Philco was a respectable firm that did a fair share of the radio business during the Twenties for which they paid the usual patent royalties to RCA. Still Philco survived on the periphery of the "Radio Trust," in which large companies like RCA, AT&T and G.E. all pooled their patents. Perhaps hoping to surmount this junior partner status in the big leagues of radio, Philco agreed to pick up the tab for Farnsworth's ongoing research. In exchange, he agreed to move the lab to Philadelphia to get Philco started in the television business.

The job of breaking Philco into television was supposed to take six months. Pem hated the idea of leaving their new house in San Francisco, but Phil eased her anxiety by assuring her that they would be back in San Francisco in the Fall.

The lab in Philadelphia was very different from the familiar home-spun loft of San Francisco. The delicate necessities of life under the wing of a large corporation presented quite a change for the Farnsworth lab gang. Among the starch-collared book-educated Philco engineers, Phil and his boys were regarded as mavericks, a gang of crazy cowboys from California. Patience often wore thin as when the intense summer heat turned Farnsworth's uninsulated top floor lab into a virtual oven. On one extremely uncomfortable day, Phil and his men abandoned protocol, and their ties and shirts, a circumstance which drove the well-heeled executives downstairs to a point of hysteria.

The image rendered in Farnsworth's tubes improved steadily as the work continued, emerging as you might expect from a crystal ball — first misty and blurred, slowly focusing, the haze burning off until the picture seems to jump out of the screen vivid and real as life itself. Six months turned into two years.

In that time, Farnsworth obtained an experimental license from the FCC to conduct over-the-air television transmissions. He set up a prototype receiver in his home, and little Philo III became the charter member of the "television generation." His usual program diet consisted of a Mickey Mouse cartoon, "Steamboat Willy" which ran over and over again through the film chain at the laboratory several miles away. While little Philo watched, his father and the engineers at Philco made adjustments and tuned the circuits.

The problems that worried Farnsworth the most involved the sensitivity of the Image Dissector tube. He devoted a lot of his time and money into testing new materials for the photoelectric surface. In the back of his own mind, Phil was thinking about devising a radical new way of boosting the

power of the feeble output. He was interested in something called "secondary emissions," and finding a way to make some use of this effect. But his thinking, which was ordinarily original and accurate, was distracted by other matters.

Phil realized that the original agreement had dragged on much longer than intended when Philco began to "manage" his research budget. It was clear that Philco had grown tired of paying all the bills without owning any of the patents, and suddenly it dawned on him that Philco and McCargar must have been renegotiating the arrangement behind his back.

Farnsworth's relationship suffered a serious setback when personal tragedy struck his family. In the winter of 1932 Phil and Pem's second son, Ken, was stricken with strept throat and died, these being the days before penicillin and sulfa drugs. The anguished parents arranged to have their child buried in Salt Lake City and Phil informed his superiors at Philco that he would need time off to accompany his wife to the funeral. Philco flatly refused Phil's request for a short leave of absence. They

cation ideas without the aid of any written records.

When he could stand the strain of a restricted operation no longer, Phil called Jess McCargar in San Francisco and simply told him that he was leaving Philco. McCargar responded with rage.

Regardless of what clever behind-the-scenes deal had been killed by Farnsworth's departure, McCargar was less than thrilled by the prospects of peddling stock in a speculative venture in the midst of the Great Depression. Making things even worse, Phil refused to move his lab back to San Francisco as Jess suggested, because he felt that the East Coast was closer to the center of the action.

As the seriousness of Farnsworth's intentions became apparent, McCargar thought that he could discourage Farnsworth by refusing to raise funds, threatening to cut him out altogether. "Where are you gonna get the money?" McCargar's voice crackled over the wires.

But a good inventor, like any good card player, is not easily separated from his principals. "If you can't find the money,

When the emotions were all played out and the discussion settled down to business, McCargar agreed to resume raising operating funds so that the job of perfecting Phil's invention could proceed. Phil reluctantly accepted the concessions that McCargar demanded, the most painful of which meant that Phil would have to pare down his staff. That meant letting go of some of the men who had come with him from San Francisco when the Philco arrangement began. Some of those people had been fired before, in San Francisco, when the funds were shut off. He hated to let those people down again. But most everyone agreed to stick it out in Philadelphia till Phil got back on his feet and rehired them again.

Shortly thereafter the venture was reincorporated once again, this time under the name of Farnsworth Television. Phil found a suitable location at 127 East Mermaid Lane, in a suburban neighborhood near Philadelphia, and with the underpaid help of Cliff Gardner and Tobe Rutherford, began rebuilding. Their task was formidable. Most of the important equipment that they needed for their work was the property of Philco and had to be left behind. They were building from scratch again.

This time the system that Farnsworth was building was a far cry from the crude wooden boxes he built back in the days of 202 Green Street. This system incorporated all the ingenious improvements that Phil and his "lab gang" had invented over the years: an electron multiplier coupled to the output of the Image Dissector greatly increased its sensitivity and signal strength; the nagging persistence of smudge and blur was overcome by inventing a new wave form, the now familiar sawtooth; a horizontal blanking signal eliminated ghosting; and the magnetic deflection coils improved to the point that camera and picture tube were each producing a remarkable 220 lines per frame.

As a result of these and many other patented inventions, the Farnsworth patent portfolio grew rapidly; the stable clarity of the picture that took shape at 127 Mermaid Lane proved that all the work had been worthwhile. Even the cabinetry had taken on the air of precise sophistication that made the advent of full scale commercialization look like just another step away.

Unfortunately for Farnsworth, the Radio Corporation was not so favorably disposed. The competition began intensifying early in 1934, when RCA began demonstrating their own new electronic television system which Zworykin succeeded in producing three years after his visit to Farnsworth's lab.

RCA's praise of Zworykin's contribution was extensive, although parts of his camera device can be traced to work done in Europe by Kalman Tihanyi, J.D. McGee and others. RCA went on to claim that this new camera tube, dubbed the "Iconoscope" was essentially the same device that Zworykin tried to patent in 1923. RCA stood by this assertion despite the fact that Zworykin worked with spinning discs and mirrors all through the late 20's — right up until the time he visited 202 Green Street.

RCA's praise for Zworykin exceeded the limits of corporate chest-beating when they further claimed that the Iconoscope and the Image Dissector performed the same function in a similar manner. RCA was, in effect, asserting that Zworykin invented the Image Dissector in 1923, and that Farnsworth was violating Zworykin's priority. To Farnsworth, this was the opening salvo in a barrage of legal maneuvers aimed at crushing the very heart of his work — the patent portfolio.

Thus, the giant Radio Corporation of America initiated patent interference proceedings against Farnsworth Television — hoping that a decision in their favor would bring Farnsworth's patents under RCA's domination. The art that Sarnoff said he "didn't need", which he tried unsuccessfully to obtain on his own stiff terms, he

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claimed that "he was too essential to their investment and could not be spared." Pem was forced to make the trip to Utah alone.

This insensitive treatment convinced Farnsworth that he could no longer depend on either McCargar or Philco to protect his interests. His suspicion became so intense that he felt compelled to stop taking notes in his journal, so that no one at Philco could claim that they owned any new work that he described in his notes. Consequently, he was forced to work out complex amplifi-

then I will," Phil answered firmly and hung up.

No sooner did the line go dead than Jess and George piled onto the transcontinental express and headed for Philadelphia. By the time Jess and George arrived, Farnsworth had already removed what equipment he could from Philco's facility and was looking for a new place to set up shop. The equipment was scattered chaotically about the Farnsworth living room, where George, Phil and Jess assembled in the early Summer of 1933.



The Philadelphia demonstration: Philo and the mayor, summer, 1934.

now tried to wrestle away through the US patent office.

Initiating the interference is fairly understandable from Sarnoff's point of view: He was spending money on television at TEN TIMES the rate that Farnsworth was spending. He needed a quick return on all that investment in order to preserve his reputation and calm the rumblings on his board of directors. Certainly, the fledgling Farnsworth organization seemed like a simple adversary to RCA.

The interference could not have come at a less convenient time for Farnsworth or his backers. The success of the new dissector tubes had raised everybody's expectations that the time for video broadcasting was at hand. Phil and Jess and George were trying valiantly to line up another license, but there seemed to be no takers. Everyone else in the industry was content waiting to see what RCA would add to its own portfolio to cover television. The litigation hopelessly forestalled the entire process; As long as his patents were under contention, Farnsworth had nothing that he could license. Win or lose, the litigation itself was a devastating blow.

RCA focused their interference on Claim 15 of Farnsworth's patent #1,773,980, which describes Farnsworth's concept of an "electrical image," which is the critical step in the process of converting light into electricity. There is something slightly intangible embodied in the precise wording of Claim 15 which reveals the indispensable process of creating an electrical counterpart of an optical image, in which values of electricity correspond to values of light. Claim 15 calls it:

An apparatus for television which comprises means for forming an electrical image, and means for scanning each elementary area of the electrical image, and means for producing a train of electrical energy in accordance with the intensity of the elementary area of the electrical image being scanned.

This is essentially the idea that Philo pictured in his mind's eye when he was 13. This paragraph describes the essence of Farnsworth's invention, the missing equation which, once found, paved the way for television as we now know it. Yet in 1934, RCA's attorneys tried to prove that Zworykin had the idea first.

Farnsworth spent many weeks answering an endless inundation of questions posed by a battery of RCA's biggest legal guns. Literally reams of testimony were taken. Every stack of depositions meant another week that Farnsworth was kept out of his laboratory, another week of progress lost to the competition.

The Champion of Farnsworth's case was a sharp young attorney, Donald K. Lippincott, who was every bit as much an engineer as he was a lawyer. Lippincott held Phil and his abilities in great esteem; Phil regarded Don as urbane without being Eastern. Together the two saw right through RCA's semantic charades and chipped away at RCA's case. They built clear concise and uncompromising arguments that methodically demolished RCA's claims.

Farnsworth and Lippincott delivered a dramatic tour-de-force when RCA challenged Phil's claim that he had first thought of his approach to electronic television while he was a high school freshman in Rigby, Idaho. RCA's attorneys greeted this assertion with a laugh — how could a mere child possibly dream up something as intricate as electronic television? Certain that Farnsworth couldn't possibly support this bold contention, the opposition pressed the point.

RCA's disbelief started to crumble when Lippincott and one RCA attorney went to Salt Lake City and tracked down Justin Tolman. Tolman recalled clearly the day that his young student drew a series of diagrams on the blackboard in Rigby. Then

to the amazement of both Lippincott and the RCA lawyer, Tolman drew from memory a simple sketch of an electronic tube, which turned out to be a precise replica of an Image Dissector. The RCA attorney shook his head in silence as he handed the drawing back to Lippincott.

In the Spring of 1934, the United States Patent Office delivered its first milestone decision in the case of Zworykin vs. Farnsworth: The decision should have been a resounding victory for Farnsworth, but RCA had six months to appeal the decision. With no money left to carry on the fight, if RCA did appeal, Farnsworth waited, holding his breath everyday of those six months. On the last possible day, RCA filed their appeal. This appeal was denied, but the die was cast: Farnsworth's entanglements with RCA went on for years, and placed the future of television in a state of suspended animation.

score some points with the public by being the first to show them what they could expect.

While Farnsworth was preparing for the Franklin Institute exhibit, he was introduced to Russel Seymour Turner, known to his friends as "Skee." Turner was an engineer and businessman whose wealthy father had acquired a healthy chunk of Farnsworth stock; Skee was sent in to see what he could do to push the enterprise closer to some sort of pay off. Skee was smitten immediately with the Farnsworth charm, and began to take a strong personal interest in Phil and the things that he had to offer.

Turner saw to it that Farnsworth had enough funds to build a completely new system for the Franklin Institute exhibit. The picture tube that Cliff made was the size of a ten gallon jug and the camera was compact even by today's standards. So

Programs were thrown together spontaneously and transmitted from the roof to an auditorium downstairs. Thousands of Philadelphians poured through the auditorium in 15 minute intervals to see what ever was appearing. Vaudeville acts, popular athletes and a swarm of politicians volunteered to appear before Farnsworth's cameras.

The crowds were totally ambivalent to the content. They came to see the image on the screen, whatever it was. They came to witness the ancient dream of seeing at a distance. For the Depression-weary populace, this was something really new — something that spoke of a future, an oracle of better times to come.

Their success at the Franklin Institute was a terrific morale booster for Farnsworth and his men. It was their first contact with so large an audience, their first undeniable proof of how big television was going to be.

The Franklin Institute demonstration attracted considerable international attention, and marked the beginning of a steady flow of foreign visitors to Farnsworth's lab at Mermaid Lane. Scientists and dignitaries from all over the world came to see the miracle in Farnsworth's living room. Phil and Skee Turner learned a great deal from their guests about the state of television around the world. They were particularly interested in stories about England, where the BBC had been conducting experimental video broadcasts for some years.

The system that the BBC was using was a mechanically scanned device that was invented by a Scotsman named John Logie Baird. Baird's first successful visual transmissions occurred in 1926, when he sent some semblance of the head of a dummy from one room to another. Some years later Baird convinced a reluctant BBC to permit him to use their channels in the evenings to broadcast blurry programs to a handful of receivers. By 1934, Baird sold more than 20,000 "Televisor" receivers in kit-form all over Europe. Still, the BBC was disappointed in the quality of Baird's picture and started looking for something better.

In the early Thirties, Baird's fortunes fell into the hands of a large British holding company called British Gaumont. Feeling that they had a considerable investment to protect, British Gaumont pushed Baird to abandon his mechanically scanned Televisor in favor of electronically scanned video. British Gaumont reasoned that if the BBC wanted electronic video, then Baird should be the one to provide them with it, even if that meant taking a license with another inventor.

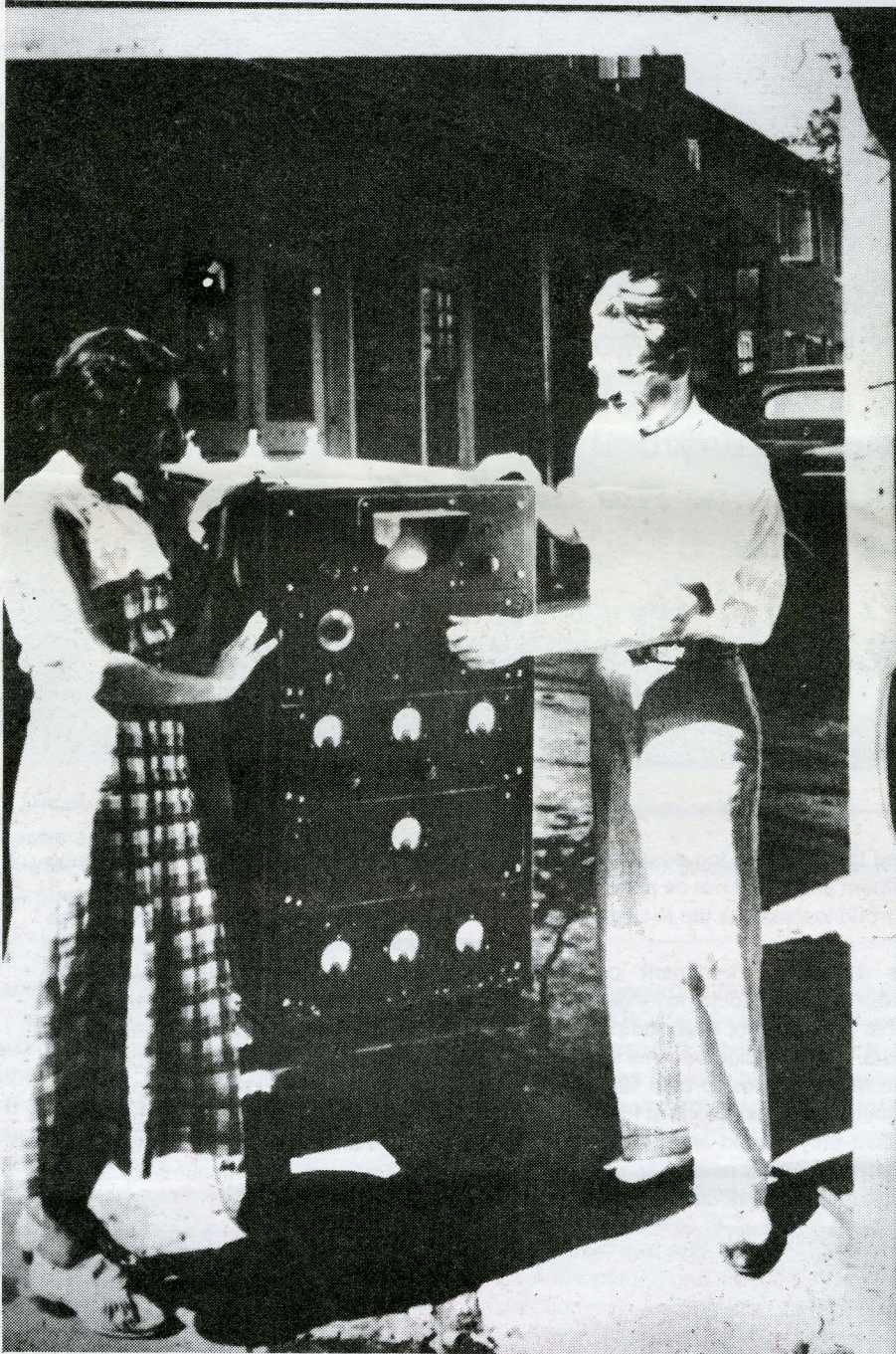
As providence would have it, Baird's people learned of a young inventor in America who was offering just such a license, and quickly dispatched a group of engineers to Philadelphia to see what the boy had to offer.

Philo Farnsworth and Skee Turner received the news of a possible license from Baird with tremendous excitement — a license in England could be the prelude to a whole series of licenses all over Europe. On arrival, the English engineers were instantly impressed with Farnsworth's system, and at their invitation arrangements were made to take Farnsworth and his invention to England, where negotiations would be concluded.

Phil and Skee revelled in the unexpected change of fortunes. At last it seemed there was new hope for television. So Philo T. Farnsworth carefully crated up his circa 1934 television mobile unit and sailed for Southampton, hoping to accomplish in Europe what he could not accomplish in America.

This article is taken from a treatment by Paul Schatzkin for an unsold television special. It was written from exclusive accounts provided by Farnsworth's widow, Pem and their oldest son Philo III. Copyright, 1977 by Paul Schatzkin. All rights reserved.

PHILO



The Farnsworths pose with the portable receiver he built for his European trip in 1934.

In the Summer of 1934, the prestigious Franklin Institute of Philadelphia invited Philo T. Farnsworth to conduct the world's first full scale public demonstration of television.

Encouraged as he was by the steadily improving performance of the Image Dissector, Farnsworth accepted the invitation, and disregarded for the time being his stalemate with RCA. After all, the future of television belonged not with any single corporation, but with the people, the audience that would buy television sets and watch television programs. Farnsworth hoped to

equipped, Farnsworth was handsomely prepared to introduce his invention.

The exhibit was an unprecedented success. There was little advanced publicity — only word-of-mouth — but people were lined up for blocks when the doors opened in August, 1934. The response was so strong that the event, which was originally scheduled to last ten days, went on day and night for three weeks.

Farnsworth placed one camera unit near the door, and the power of his invention was instantly driven home to anyone who entered, for they were immediately confronted by their own disembodied image.